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SHANGHAI - MANILA

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March, 1915.

JAPAN AND MANCHURIA

A Precis of the Struggle for Political and Economic Predominance in the Three Eastern Provinces

Sino-Japanese Negotiations

A Sketch of the Proceedings at Peking between China and Japan

Railway Map of China

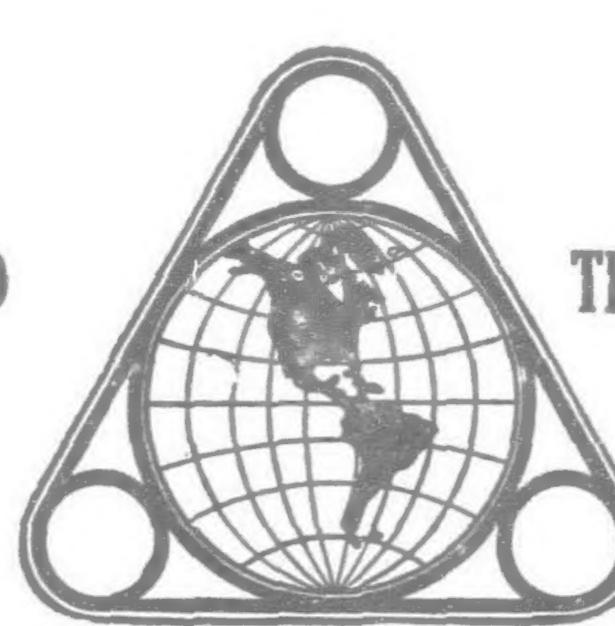
Specially revised and brought up-to-date; showing the Spheres in China which Japan aims at Dominating

The Mines of Shantung

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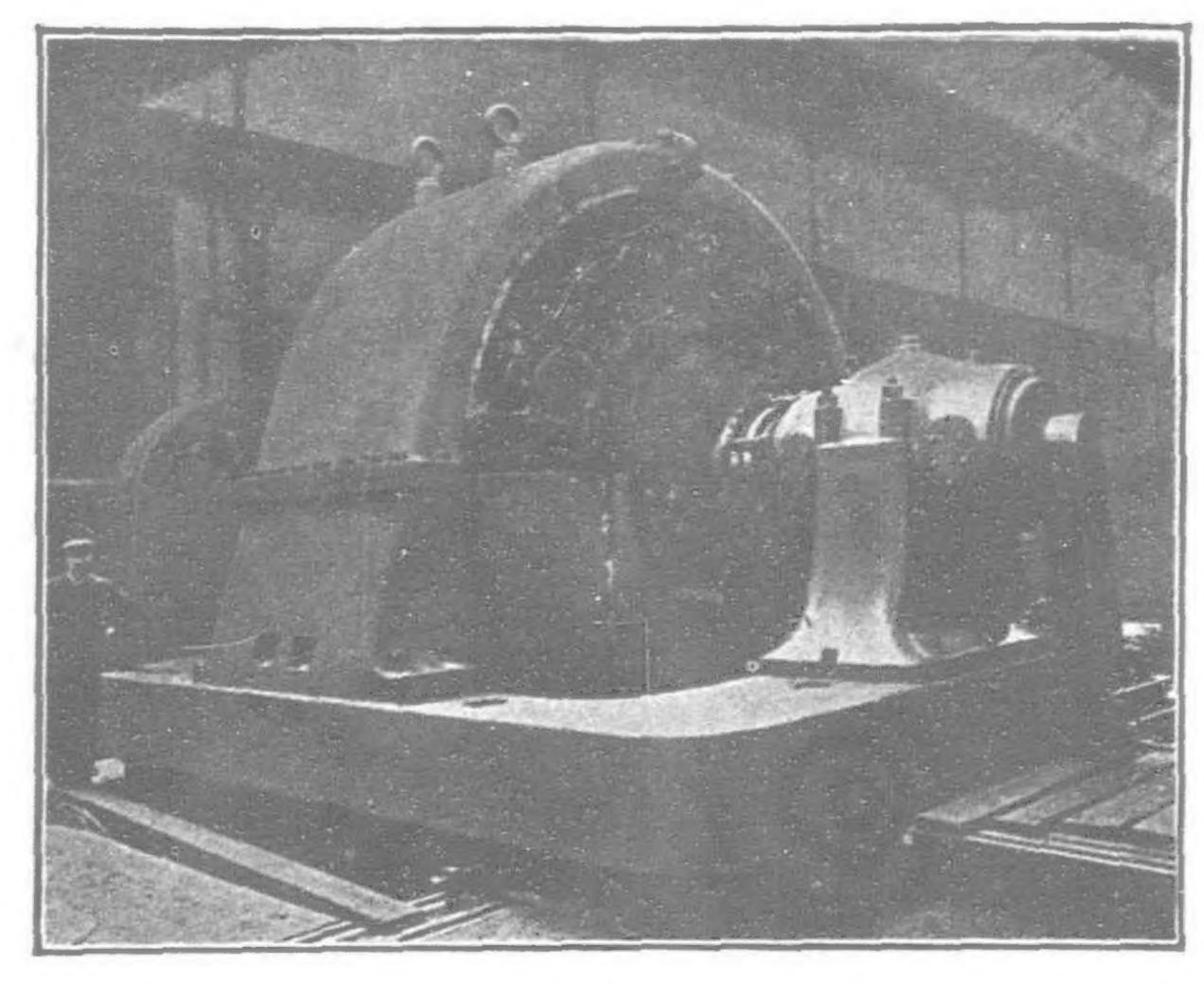
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VOL. XI.

SHANGHAI, MARCH, 1915

No. 10

THE STRUGGLE FOR THE MANCHURIAN RAILWAYS

A Precis of the Diplomatic and Military Combats leading to Japan's Dominance in South Manchuria

By securing from China the control and administration of the Kirin-Changchun Railway, an extension of the agreements governing the South Manchuria and Antung-Mukden Railways, as well as the refusal of foreign loans for railway purposes in South Manchuria, Japan has the satisfaction of knowing that she is now dominant in the country so far as railways are concerned even if she is eventually unable to extract from China the consent necessary to establish her overtly in a supremely favored position politically. In another article in this issue the progress of the negotiations which have been proceeding between Japan and China are specially dealt with. Here it is intended merely to refer to the railways concerned. They are interesting masmuch as they have constituted the basis in the past of much international heart-burning, and, in fact, of strenuous and dramatic political wire-pulling. By now acquiring practical mastery of them Japan is able to write finis to a long and vicissitudinous chapter of Manchurian history, and some other nations may be able to shed a tear of poignant regret upon the grave of great ambitions. Statesmen of both Russia and America once entertained dreams of exercising considerable influence over the rich territory comprising the cradle of the Manchu race, but it seems that Destiny had marked it out that if any foreign Power should usurp the rights and prerogatives of the Chinese nation that Power should be Japan. And the Japanese people, too, have ever professed the belief, and laboured to materialise the belief, that they were the ones chosen to supervise, if not actually control, the development of the region. Their success against the arms of Russia was complacently accepted by them as Providential recognition of their title to a just heritage. Nor were the claims of China, the aeons of occupation by the Manchus, or the protestations of Occidental nations possessed of distinct treaty privileges permitted by the Japanese to stand in the way of the consummation of their plans to acquire a full and free ascendancy. They have worked steadily and well. Not even the severest critic will gainsay that; nor will the critic minimise the praise that is due them for improving the economic conditions wherever they have set to work to reform or develop them, malgre that the efforts have been bentt of avour Japan rather than to be made universally Profitable.

The doctrine of equal opportunity so readily affirmed by Japan has been subordinated to the needs of national ambition unwittingly or deliberately until writers like Mr. J. O. P. Bland are able with justification to lament that certain articles of the Treaty of Peace between Japan and Russia, the instrument whereby Japan received legal title to her inheritance of the leases of Port Arthur and Dalny and the immediate littoral,

"possess only a melancholy retrospective interest to-day, having served merely to demonstrate the futility of Treaties that clash with the interests of the strong." Yet high Japanese publicists declare themselves able conscientiously to declare that Japan as a nation has taken no improper advantage of her influential position, and that she stands as one of the foremost exponents of the doctrine of the "open door" and the champion of the independence and integrity of China. Commercial men of other nationalities will, on the other hand, affirm that since Japan has secured control of the railways of Manchuria there has been unblushing discrimination against them, and on that count alone the opinion has grown, rightly or wrongly, that Japan's dominance in Manchuria is prone eventually to exacerbate large sections of the world's manufacturers desiring to participate in the markets of this region. It is, however, now possible for Japan arbitrarily to correct any of the wrong impressions that have gained a hold upon the minds of certain people, and if Japan does act so as to inspire confidence in her "open door" pledges there will be none among foreign nations who will begrudge her the pre-eminent position she has so laboriously acquired.

Entry and Exit of Japan.

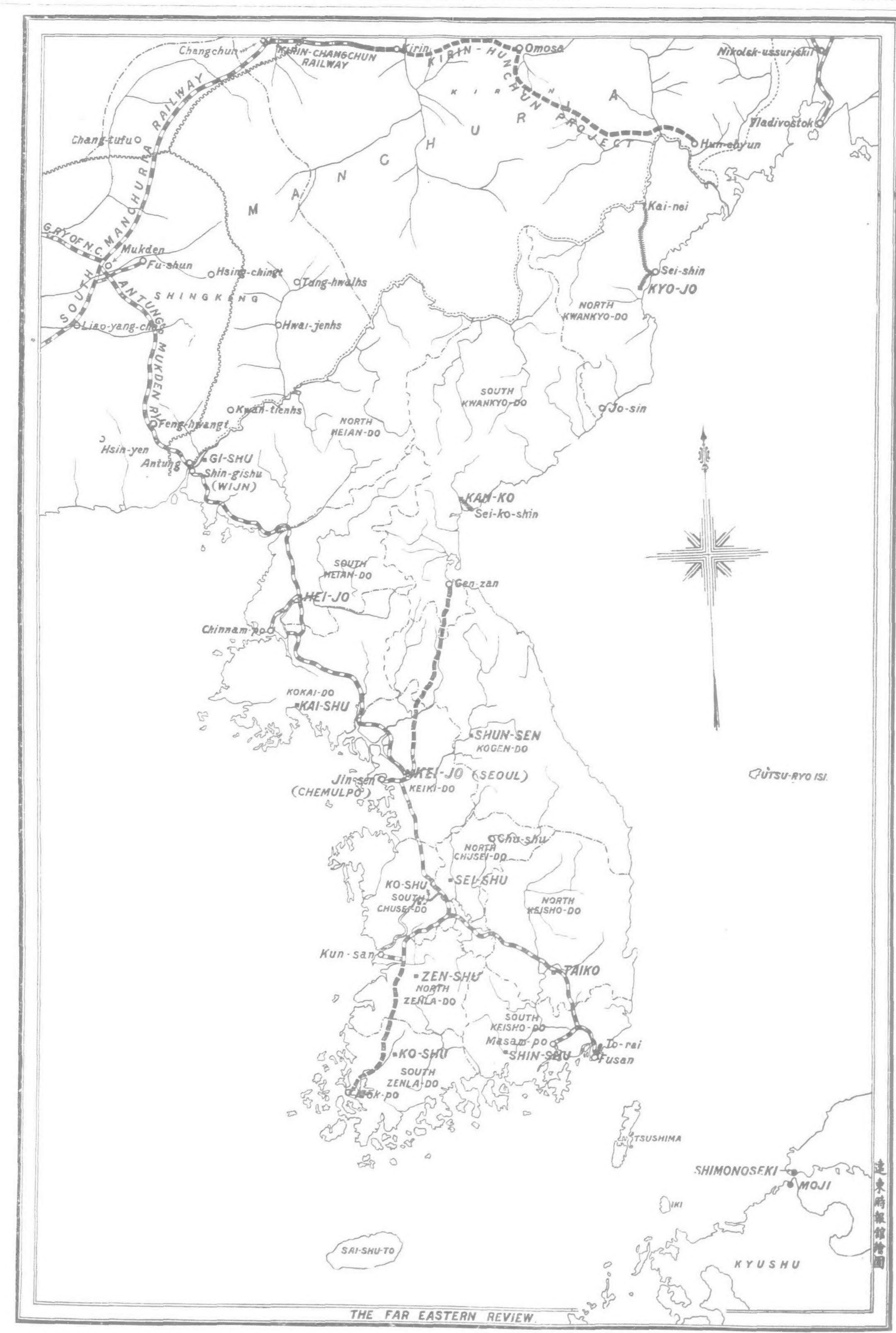
She will have succeeded where some of them have failed. Russia aimed at procuring for herself what Japan previously acquired, was prevented from holding, and now virtually possesses, but something of finesse was lacking in Russian diplomacy and the war with Japan was precipitated in 1904, ten years after the war which Japan victoriously conducted against China and by virtue of which she gained the southern portion of the province of Fengtien. In the Treaty of Shimonoseki, signed on April 17, 1895, China, among other things, ceded to Japan "in perpetuity and full sovereignty together with all fortifications, arsenals, and public property thereon":—

The Southern portion of the Province of Fengtien within the following boundaries: The line of demarcation begins at the mouth of the river Yalu, and ascends that river to the mouth of the river Anping; from thence the line runs to Fenghuang; from thence to Haicheng; from thence to Yingkow (the port of Newchwang) forming a line which describes the southern portion of the territory. The places above named are included in the ceded territory. When the line reaches the river Liao at Yingkow it follows the course of that stream to its mouth where it terminates. The mid-channel of the river Liao shall be taken as the line of demarcation. This cession also includes all islands appertaining or belonging to the Province of Fengtien situated in the eastern portion of the Bay of Liaotung and in the northern part of the Yellow Sea.

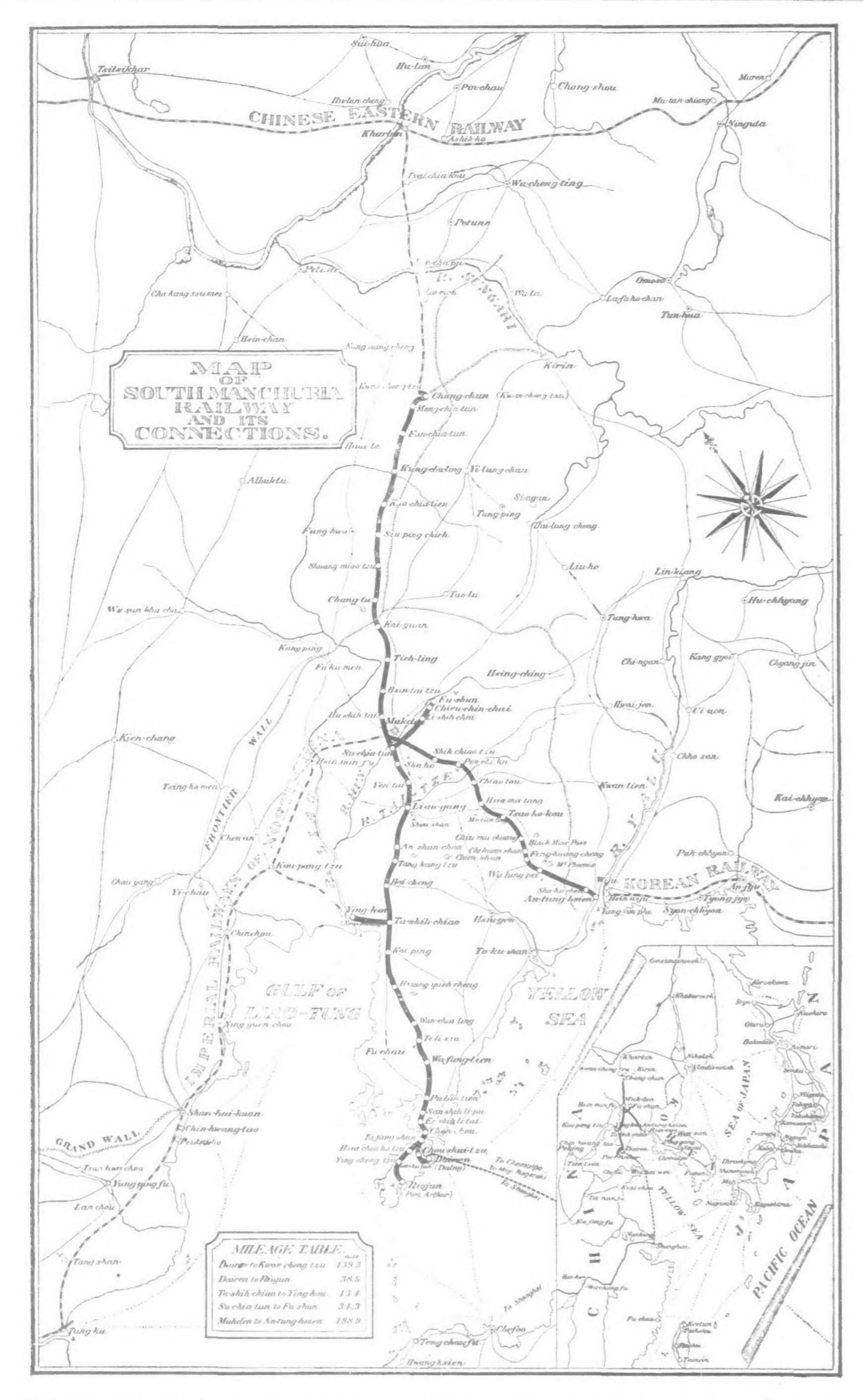
Whereby Japan received legal title to her inheritance of the leases of Port Arthur and Dalny and the immediate littoral,

The territory thus ceded to Japan was the Liaotung Peninsula, the chief ports in the south being Port Arthur and Dalny and the immediate littoral,

Dalny, and believing that she would enjoy full and free possession



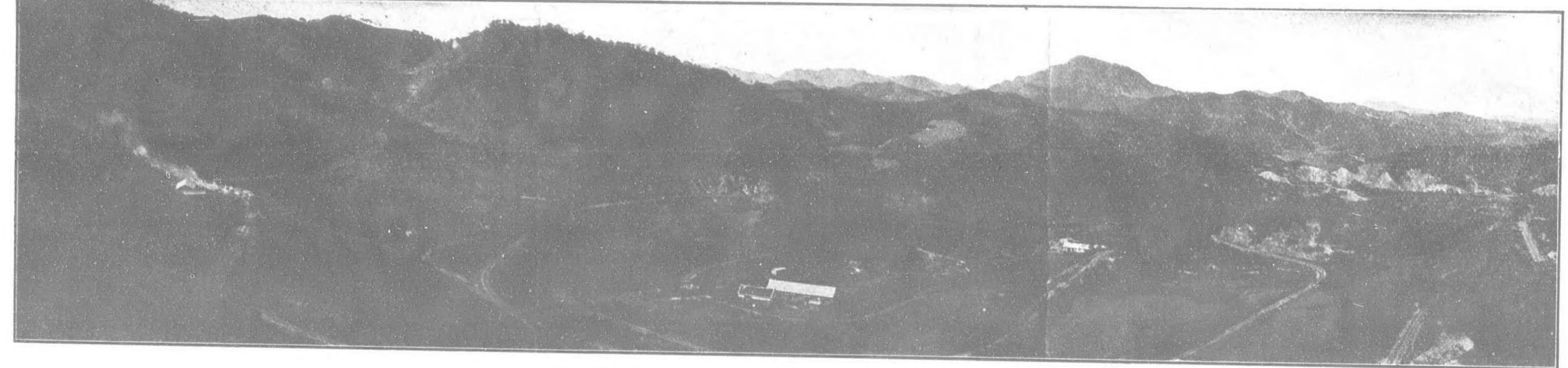
MAP SHOWING THE RELATION OF THE ANTUNG-MUKDEN, THE KIRIN-CHANGCHUN AND THE KOREAN RAILWAYS
TO THE SOUTH MANCHURIA RAILWAY.



MAP OF SOUTH MANCHURIA SHOWING CONNECTIONS WITH CHINESE EASTERN AND KOREAN RAILWAYS AND THE CHINESE GOVERNMENT LINE FROM MUKDEN TO PEKING.



Panorama of Antung with the Yalu River in the distance.



The Antung-Mukden Railway-Black Mine Pass.

of legitimate spoils of war, she is not to be blamed for indulging in lavish thoughts of empire building. She reckoned without other Powers, however. Russia had distinct ambitions with regard to Manchuria, as it provided the way to an ice free port, and other nations had reasons for keeping Japan from settling there though they were willing enough that she should ultimately take Korea. Russia, Germany and France, therefore, combined to force Japan to relinquish her acquisition, and although the ratifications of the Shimonoseki Treaty were exchanged at Chefoo on May 8, 1895, Japan succumbed to the inducements of the nations mentioned and relinquished the ceded districts on the ground that their retention by Japan "would be detrimental to the lasting peace of the Orient." A Convention for the retrocession of Liaotung was consequently signed between China and Japan on November 8, 1895, the Chinese undertaking to pay 30,000,000 Kuping Taels before November 16, 1895. This was done, and by November 30 the evacuation of Manchuria by the Japanese was commenced, and was completed in December.

Russia and the Cassini Convention.

The Japanese were thus prevented from developing Manchuria as their prize of the war, and no sooner were they out of possession than Russian emissaries became active in laying foundations for the building of railways in Manchuria to connect the trans-Siberian system with the sea at Dalny and Port Arthur. Principal among these was Count Cassini, the Russian Minister at Peking, who, in 1896, is reputed to have secured an agreement with the Chinese Government for the building of the desired railways. Premature publication of the documentwhich was known as the Cassini Convention—and consequent excitement among other Powers led to denials of its existence both by Russia and by China. This Convention, however, opened the question definitely of a railway through Manchuria, and as a matter of historical interest the clauses dealing with railways may be quoted. The preamble sets out that the officials appointed to negotiate the convention were to consider certain matters concerning the connecting of the railway system of the Three Eastern Provinces (Fengtien, Kirin and Heilungkiang) with that of the Imperial Russian Railway in the Province of Siberia, with the object of facilitating the transport of goods between the two Empires, and of strengthening the frontier defences and sea-coasts; and furthermore to agree upon special privileges to be conceded by China to Russia as a response to the loyal aid given by Russia in the retrocession of Liaoyang and its dependencies. The articles of special interest were:

1.—Owing to the fact that the Russian Great Siberian Railway is on the point of completion, China consents to allow Russia to prolong her railway into Chinese territories (a) from the Russian Port of Vladivostock into the Chinese city of Hunchun, in the Province of Kirin, from thence northward to the Provincial capital of Kirin, and (b) from a railway station of some city in Siberia to the Chinese town of Aigun in Heilung-kiang Province, from thence south-westward to the Provincial capital of Tsitsihar, and from thence to the town of Petune in Kirin Province, and from thence south-eastward to the Provincial Capital of Kirin.

2.—All railways built by Russia into the Chinese Provinces of Heilungkiang and Kirin shall be built at the sole expense of Russia and the regulations and buildings thereof shall be solely on the Russian system, with which China has nothing to do, and the entire control shall be in the hands of Russia for the space of thirty years. At the end of the said period China shall be allowed to prepare the necessary funds wherewith, after proper estimation of the value of the said railways, she shall redeem them, the rolling stock, machine shops, and buildings connected therewith. But as to how China will at that date redeem these railways shall be left for future consideration.

3.—China is now in the possession of a railway, which she intends to extend from Shanhaikwan into the Provincial Capital of Fengtien—namely Mukden (Shengking), and from Mukden to the Provincial Capital of Kirin. If China should hereafter find it convenient to build this road she shall allow Russia to provide the funds to build the railway from the city of Kirin on behalf of China, the redemption of which road shall be permissible to China at the end of ten years. With reference to the route to be taken by this railway, Russia shall follow the surveys already made by China in connection therewith, from Kirin to Mukden, Newchwang, etc.

4.—The railway to be built by China, beginning from Shanhaikwan, in Fengtien, to Newchwang, to Kaiping, to Chinchow, to Lushunkou (Port Arthur), and to Talienwan and their dependencies, shall follow the Russian railway regulations in order to facilitate the commercial intercourse between the respective Empires.

While the above articles are the only ones dealing with railway routes, others provide for railway guards, etc., and en passant it may be noted that provision is also made for Russia to

lease the port of Kiaochau for fifteen years, and to assist China to fortify Port Arthur and Dalny, Russia to "lend all necessary assistance in helping to protect these two ports, and shall not permit any foreign power to encroach upon them." As has been mentioned, the signature of this Convention was denied by the Powers concerned in it, but that it was drawn up for signature if not actually signed, sealed and delivered, is regarded as certain by those who ought to know. Its suppression did not by any means deter or disturb Russia in the development of her designs to secure a railway through Manchuria, and balked in one direction she readily turned to another.

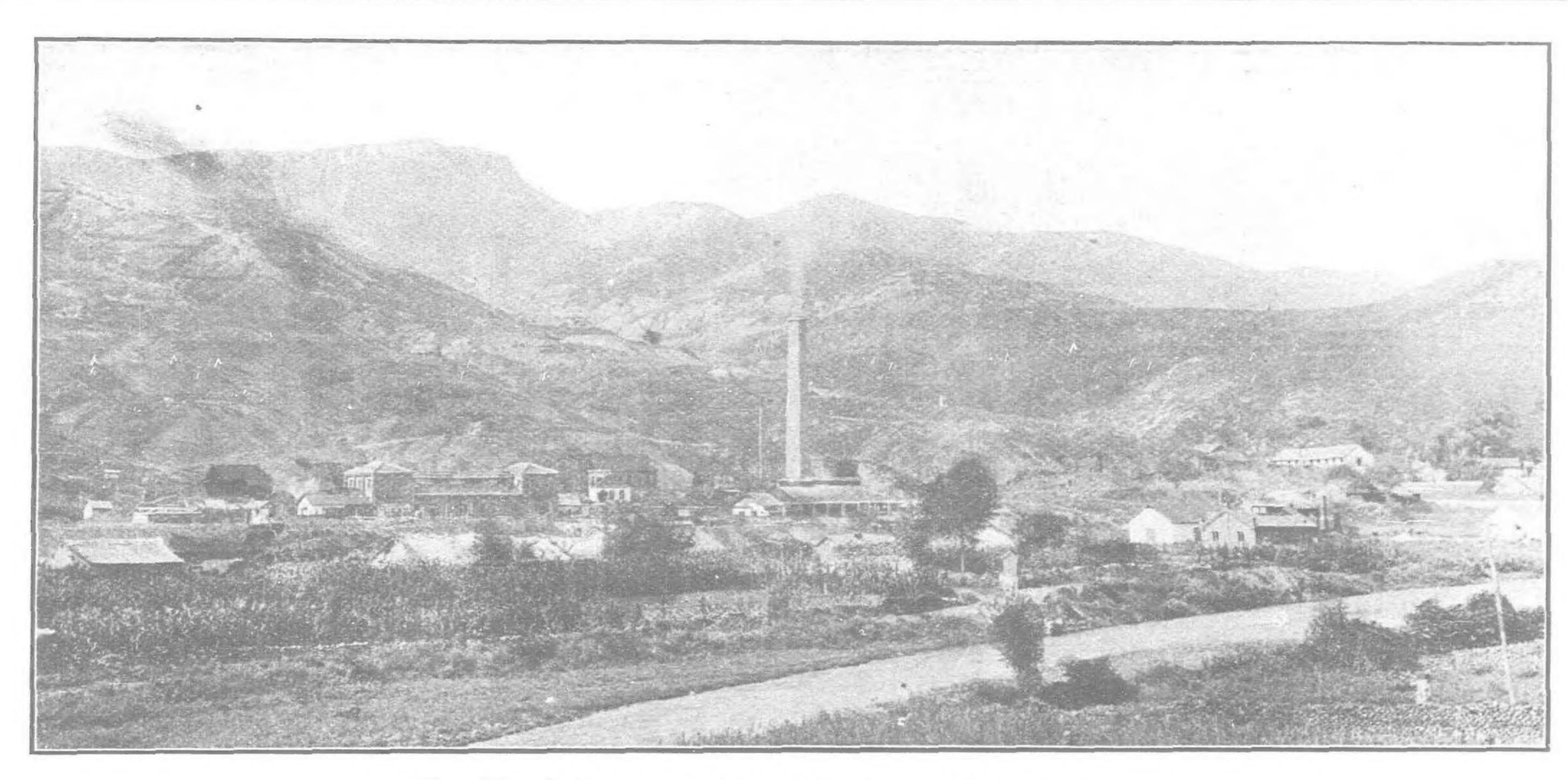
Birth of the Chinese Eastern Railway Co.

The representatives of the Russo-Asiatic Bank became active in negotiations with the Chinese and on September 8, 1896, concluded an agreement with the Chinese Government for the formation of "the Chinese Eastern Railway Co., for the construction and working of a railway within the confines of China, from one of the points on the western borders of the Province of Heilung-kiang to one of the points on the eastern borders of the Province of Kirin, and for the connection of this railway with those branches which the Imperial Russian Government will construct to the Chinese frontier from Trans-Baikalia and the Southern Ussuri lines."

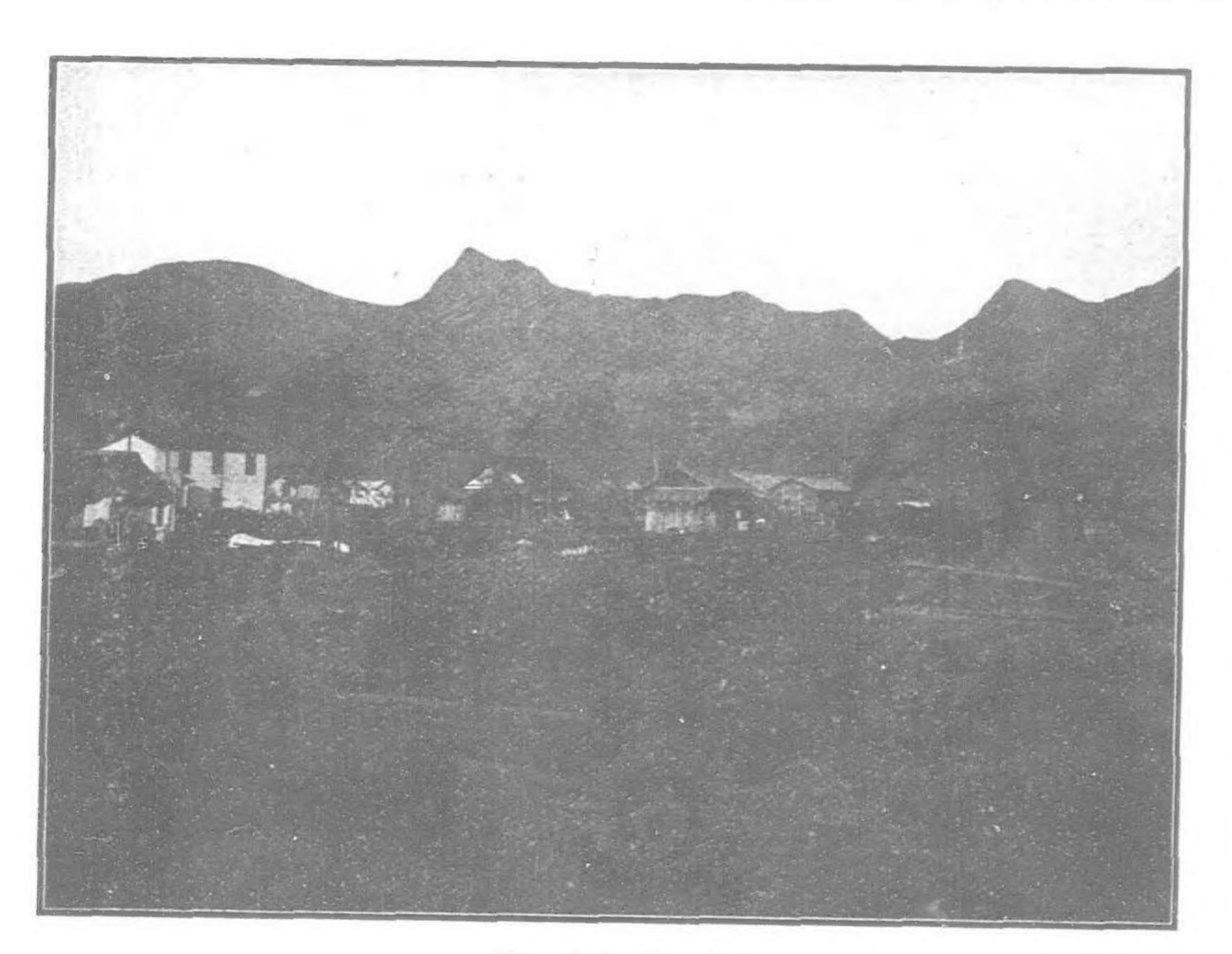
It is noticeable that the agreement contained no definite mention of the Manchurian railways specified in the Cassini Convention, but subsequent developments showed that they were kept in mind. Points of interest that the Agreement did contain, however, were that the Chinese Eastern Railway Company should have the right to exploit coal mines and other mining and industrial enterprises; that the shares of the Company should be owned only by Russian and Chinese subjects; that the Company should only retain possession of the Chinese Eastern Railway during the course of eighty years from the day of opening the traffic along the whole line, the railway then to revert to the Chinese Government without payment; that on the expiration of thirty-six years from the time of completion of the whole line and its opening for traffic the Chinese Government should have the right of acquiring the line on refunding to the Company in full all the outlays made on it, and on payment for everything done for the requirements of the railway; that the line should be completed not later than six years from the time when the direction of the line should be finally determined and the necessary land assigned to the Company; that the capital of the Company should be fixed at five million nominal credit roubles, divided into 1,000 shares at 5,000 nominal credit roubles, the remaining portion of the capital to be formed by the issue of bonds; that the gauge should be the Russian gauge of five feet.

Possessed of this agreement, the Russo-Asiatic Bank formed the Chinese Eastern Railway Company, and surveys were made, the first sod of the Manchurian Railway being cut at a point on the eastern frontier of the Province of Kirin and the Primorsk on August 28, 1897.

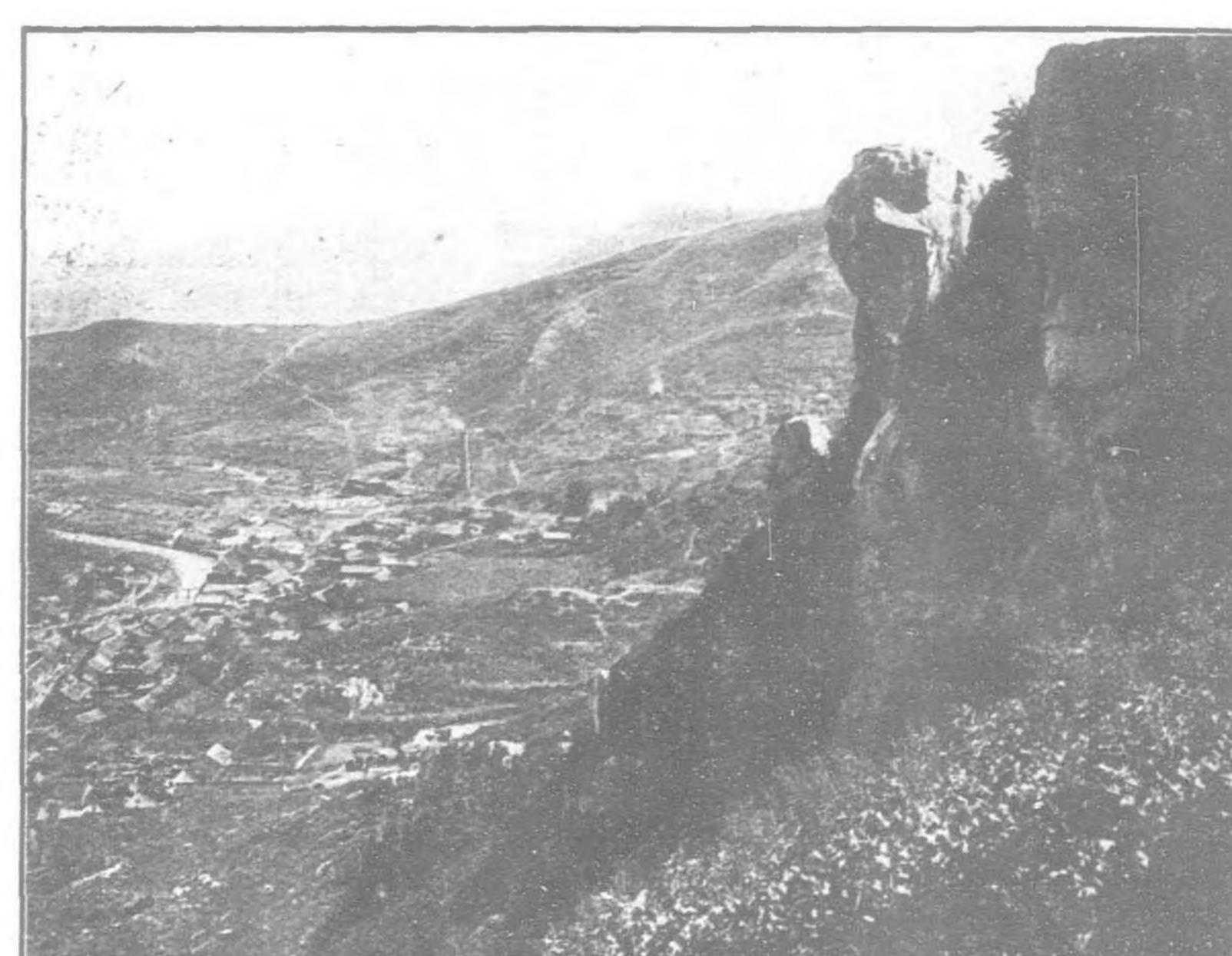
Meanwhile the Russian diplomats were engaged in arranging with China for the lease of Port Arthur and Dalny, and on March 27, 1898, an agreement was signed giving effect to this desire. This permitted a definite objective being obtained for the railway. In order to extend the Russian line to Port Arthur and Dalny an agreement was entered into at St. Petersburg on July 6, 1898, between the Chinese and Russian Governments giving the right for the construction of a branch line. Article i stipulated that the branch should be known as the South Manchurian Branch of the Chinese Eastern Railway. Other articles provided that the Company should be given facilities to transport materials by land or water for the railway; that they should be permitted to build temporary branch lines from the Southern Manchurian line to Yingkou and seaports in the neutral zone, but when the work of building the railway was completed and the whole line opened to traffic all these temporary branch lines should be removed at the pleasure of the Chinese Government. The agreement also provided that the Company should have the right to fell timber, mine coal, and establish a steamship line. It was also stipulated that Russia should have the right to fix Customs duties in the leased territory on the Liaotung Peninsula. By the spring of 1898 a site was selected near



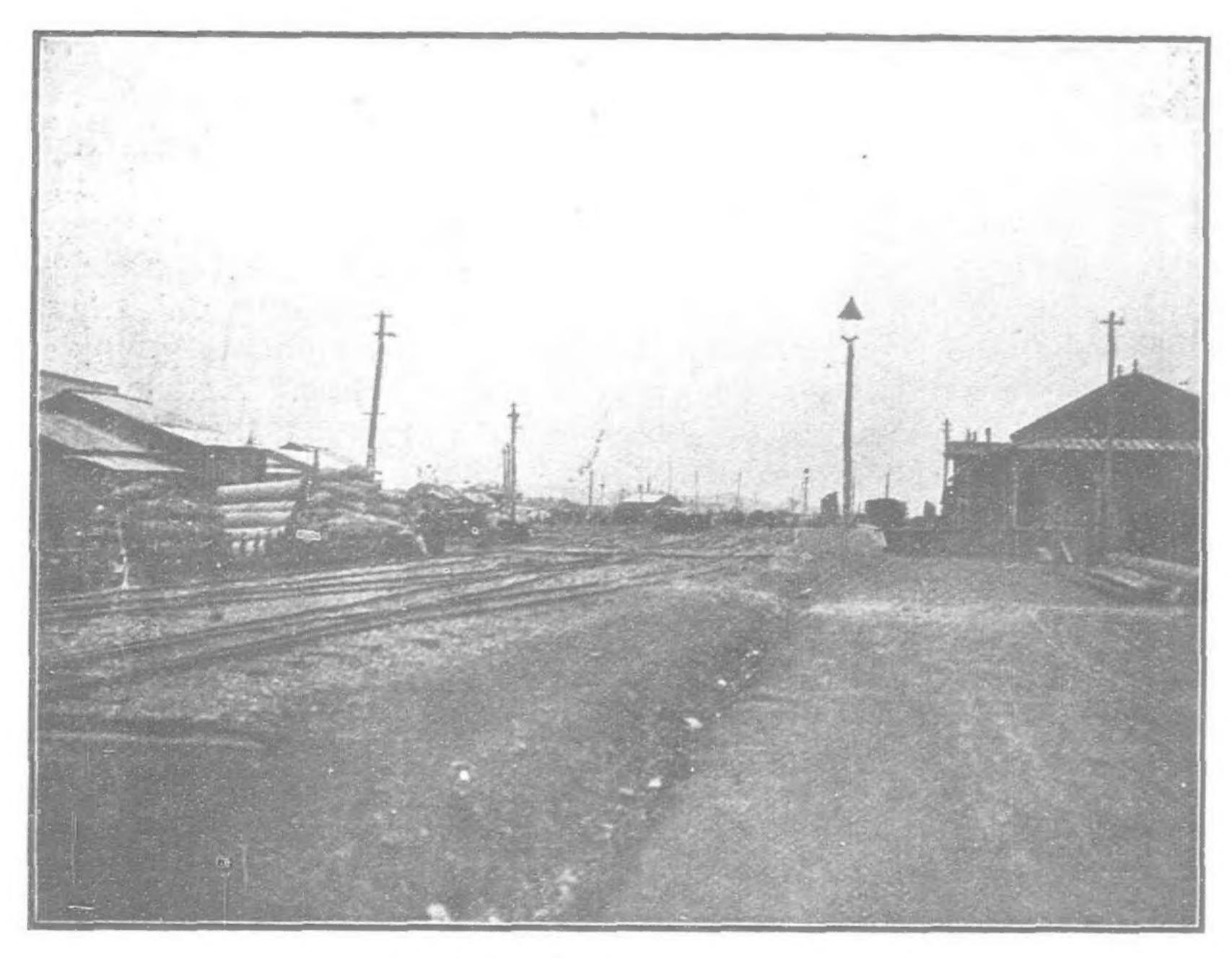
Penchihu Colliery on the Line of the Antung-Mukden Railway.



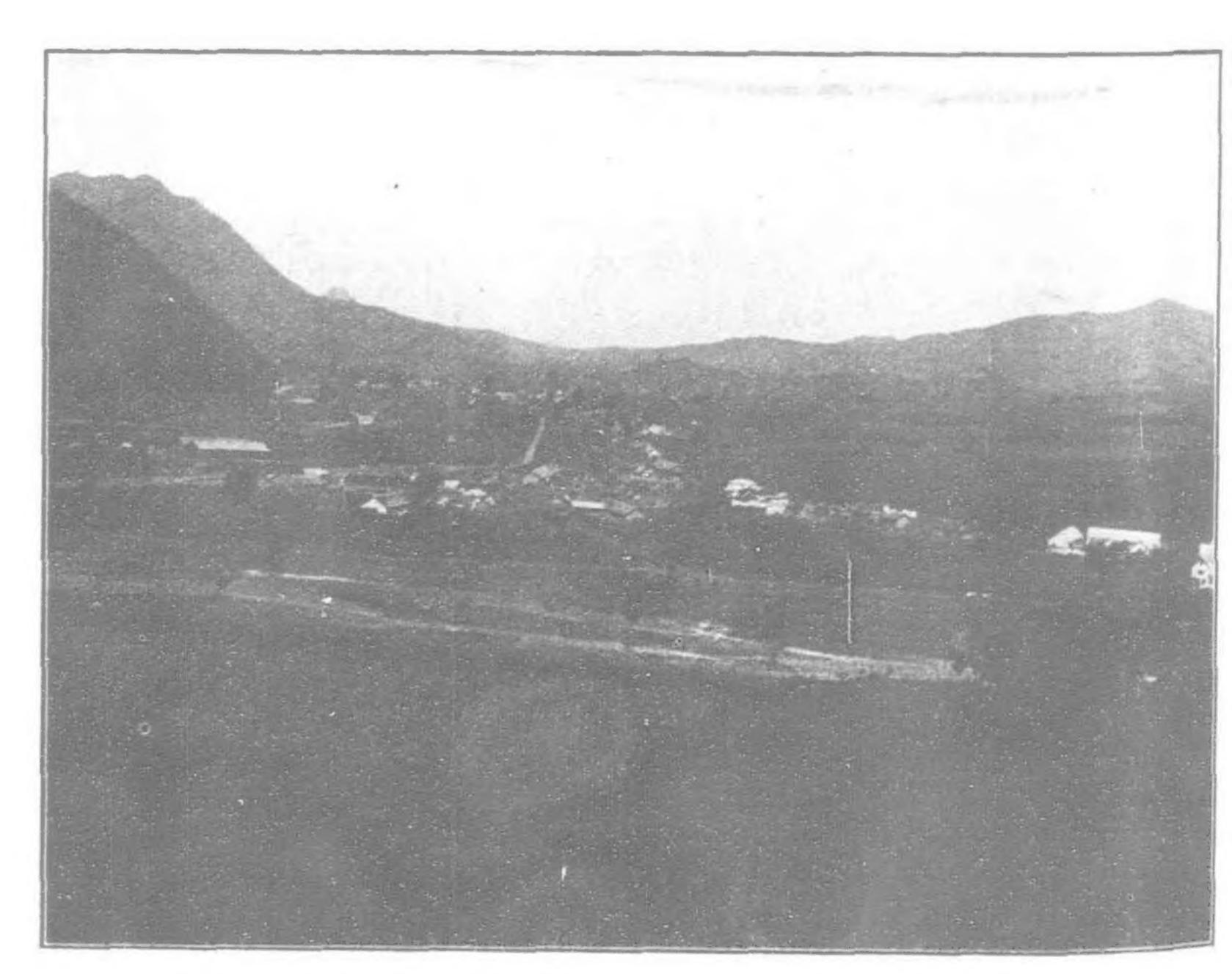
Penchihu Station.



Penchihu Town and Colliery.



Railway Station at Antung.



View of Tsaohoku; midway between Antung and Mukden.

Newchwang, on the Liao River, as the terminus of a branch line to be constructed to connect Port Arthur and Dalny with the Manchurian railway. This short line was completed in 1899 and work on the main line southwards to Port Arthur and northwards to Mukden was begun, and by 1900 the railway from Harbin to Port Arthur was practically completed with the exception of a number of bridges. During the Boxer rising much of the line was destroyed, but upon the suppression of the movement work was vigorously renewed and by the fall of 1901 the entire Chinese Eastern Railway connecting the Trans-Siberia with Vladivostock across Manchuria, and the line south from Harbin to Port Arthur was completed. This system in Manchuria in all measured some 1,600 miles, and is stated to have cost the Russian Government 300,000,000 roubles, or roughly \$90,000 gold, per mile. And in addition to this Russia is stated to have expended another 250,000,000 roubles in building Port Arthur, Dalny, Harbin, fortifications and other enterprises outside the strictly railway work.

The Trend of Russian Diplomacy.

In the minds of those who conceived the great project, however, it was worth the money. It provided Russia with a railroad to an ice free port, and opened the way to supremacy in Manchuria and Peking and the ultimate absorption of Korea, a Russian dream of the period. Up to 1900 Russian diplomacy had worked, according to Mr. Putnam Weale in his "Reshaping of the Far East," to accustom China to three "grand points of view." The first was that Russia, "being without any convenient bases in the Far East free from ice all the year round, must be granted some port, or ports, which she could share with China. The second, leading as it were to the third, was that unless Russia were able to exert her great strength as a land Power her friendship with China could not take the form of material support in case a fresh crisis in the Far East should arise, and Japan attempt to repay China for calling in the help of the West. And the third and concluding point was this: In order to bring her myriads of soldiers to the Far East, Russia had already begun, years before the Japanese war, a grand trunk railway at great expense to herself; but as the railway would have to follow the northern bank of the Amur River it would be indefinitely delayed unless a more convenient route could be granted by generous and magnanimous China, who had already bestowed the Primorsk. . . . In the Cassini Convention we see all these points of view in their crude and undeveloped shape. . . But the premature publication of the document changed the programme materially. Instead of a vague whole, a definite chain was now substituted link by link, as opportune moments presented themselves, and it was only due to disastrous 1900, which surprised every one from the Manchus to the Muscovites, that the proper methodical development of daring things was upset and hopelessly deranged. A whole volume might be filled tracing in great detail the curious process through which Russian diplomacy was forced to go from the moment of the Boxer rising to the outbreak of the great war (between Russia and Japan). . . . Prince Tuan (whose party usurped the Government of China) declared a special war against Russia, in special edicts, ordering all Russians to be driven out of Mongolia and Manchuria. Russia again retorted by invading Manchuria and occupying the capitals, carrying fire and sword everywhere. . . . Finally Russians, in company with the troops of all nations, entered Peking. . . . During 1901 Russia had three distinct and separate roles to play in China: the part of ally to all Europe; the part of China's dear and secret friend in Peking; and the part of Manchuria's real master in the invaded provinces; whilst over and above in Europe she had to quiet the secret fears of numerous Chancelleries busily inquiring as to her real plans in the future. Parties in the Manchu Court began to raise their voices and earn merit safely by pointing out that it was incompatible with Chinese dignity to allow Manchuria, the cradle of the reigning dynasty, to remain in foreign hands. To the chorus of these voices the vernacular and English press in the Far East added its quota. . . . By the spring of 1902 matters had reached such a pitch that Russia had to cease acting so many different and ill-assorted roles and sign unconditionally the Manchurian Evacuation Agreement of the 8th of April, 1902. interest of that Railway. This clause is interesting inasmuch as

. . . By 1903 Russia was assured that neither England nor America, in company with Japan, were prepared to go to the same lengths as Russia herself had done with France and Germany in 1895 over the Liaotung peninsula business, and therefore Russia was not unhappy. . . . The immediate consequences of the 1900 outbreak was to see Japan's position in regard to China vastly improved. . . . A party sprang into existence (in Peking) which openly favored a pro-Japanese policy in place of the former Russian entente cordiale, and the continuous presence of the Russians in Manchuria was responsible for the continuous quoting of that old Chinese proverb, whose origin is shrouded in the mists of antiquity, 'Do not fear the cock from the south but the wolf from the north.' . . . But it was with considerable surprise that both the Chinese Government and the Chinese press finally realized by the summer of 1903 that Japan had actually commenced direct negotiations with Russia and was determined to press for a definite understanding on all disputed points in the Far East."

Long before this, however, Japan had misgivings with regard to Russia's aggressive policy in Korea. Japan's situation in that country, too, had been jeopardised owing to the complicity of certain Japanese in the assassination of the Korean Queen, and it was not without difficulty that Japan had succeeded in arriving at a temporizing arrangement with Russia by means of the Yamagata-Lobanow Convention of 1896, the Komura-Weber Memorandum of 1896, and the Nishi-Rosen Protocol of 1898. This strained relation between Japan and Russia was aggravated by the latter's occupation of Manchuria after the Boxer trouble, and the negotiations above mentioned culminated in the war between Japan and Russia in 1904.

The Ejection of Russia.

Russia, to the surprise of the world, was defeated by Japan, and by virtue of the Treaty of Peace signed at Portsmouth, United States, on September 5, 1905, Japan came back into what she regarded as her own. The Treaty inter alia set down that Russia agreed that all rights possessed by her under the lease of Port Arthur and Dalny were to revert to Japan; Manchuria was to be evacuated simultaneously by both parties, and China was to be unhampered there in her methods of developing the natural resources of the country. Along the line of the railway through Manchuria separate zones were to be marked out and each of the contracting nations was to be supreme within its own sphere. The section of the Manchurian railway thus acquired by Japan was that extending from Changchun to Port Arthur and Dalny.

Article 6 of the Portsmouth Treaty, which dealt with the railway transfer, is as follows:-

The Imperial Russian Government engage to transfer and assign to the Imperial Government of Japan, without compensation and with the consent of the Chinese Government, the railway between Changchun (Kuan-cheng-tzu) and Port Arthur and all its branches, together with all rights, privileges, and properties appertaining thereto in that region, as well as all coal mines in the said region belonging to or worked for the benefit of the railway.

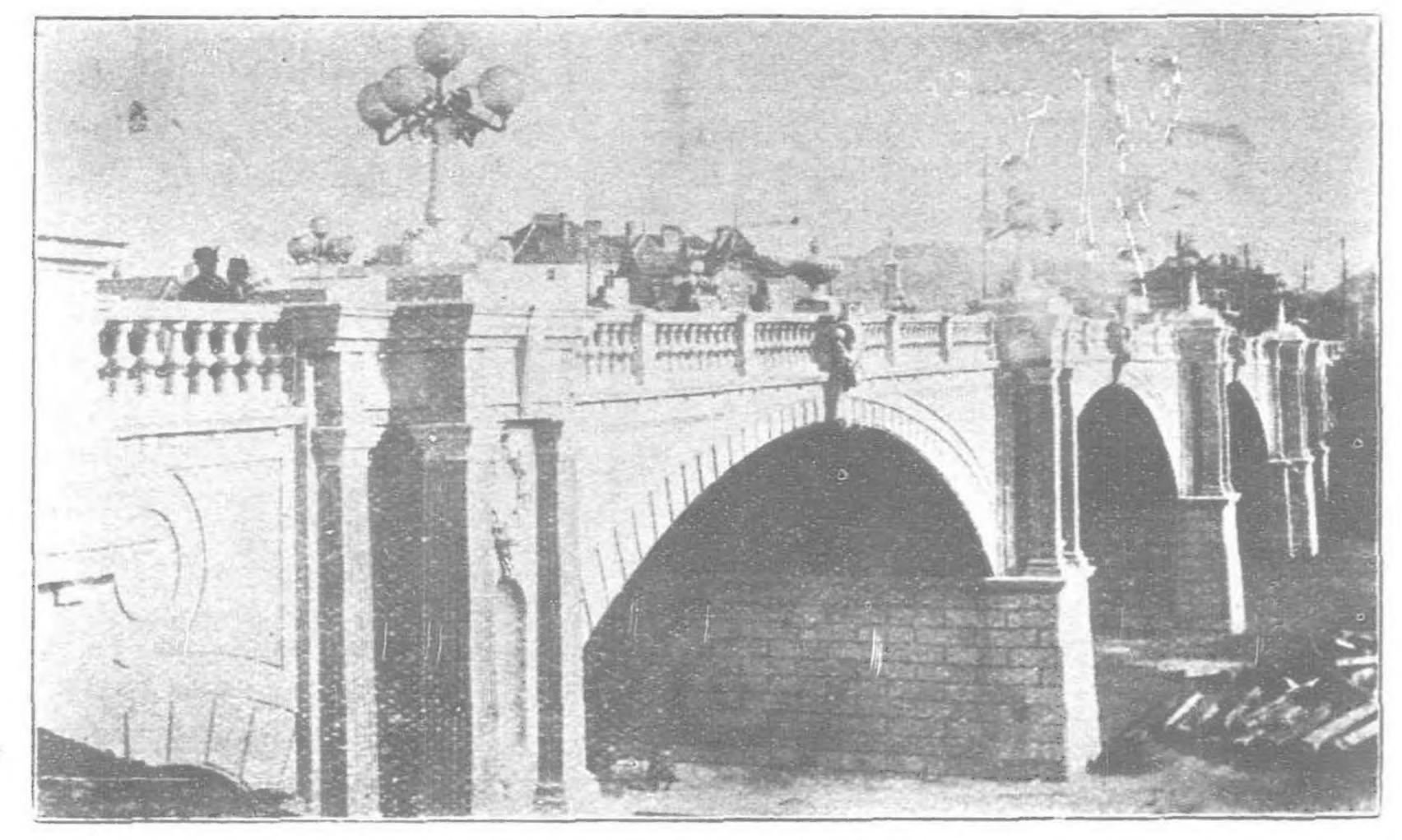
The two High Contracting Parties mutually engage to obtain the consent of the Government of China mentioned in the foregoing stipulation.

Japan and Russia engage to exploit their respective railways in Manchuria exclusively for commercial and industrial purposes and in no wise for strategic purposes.

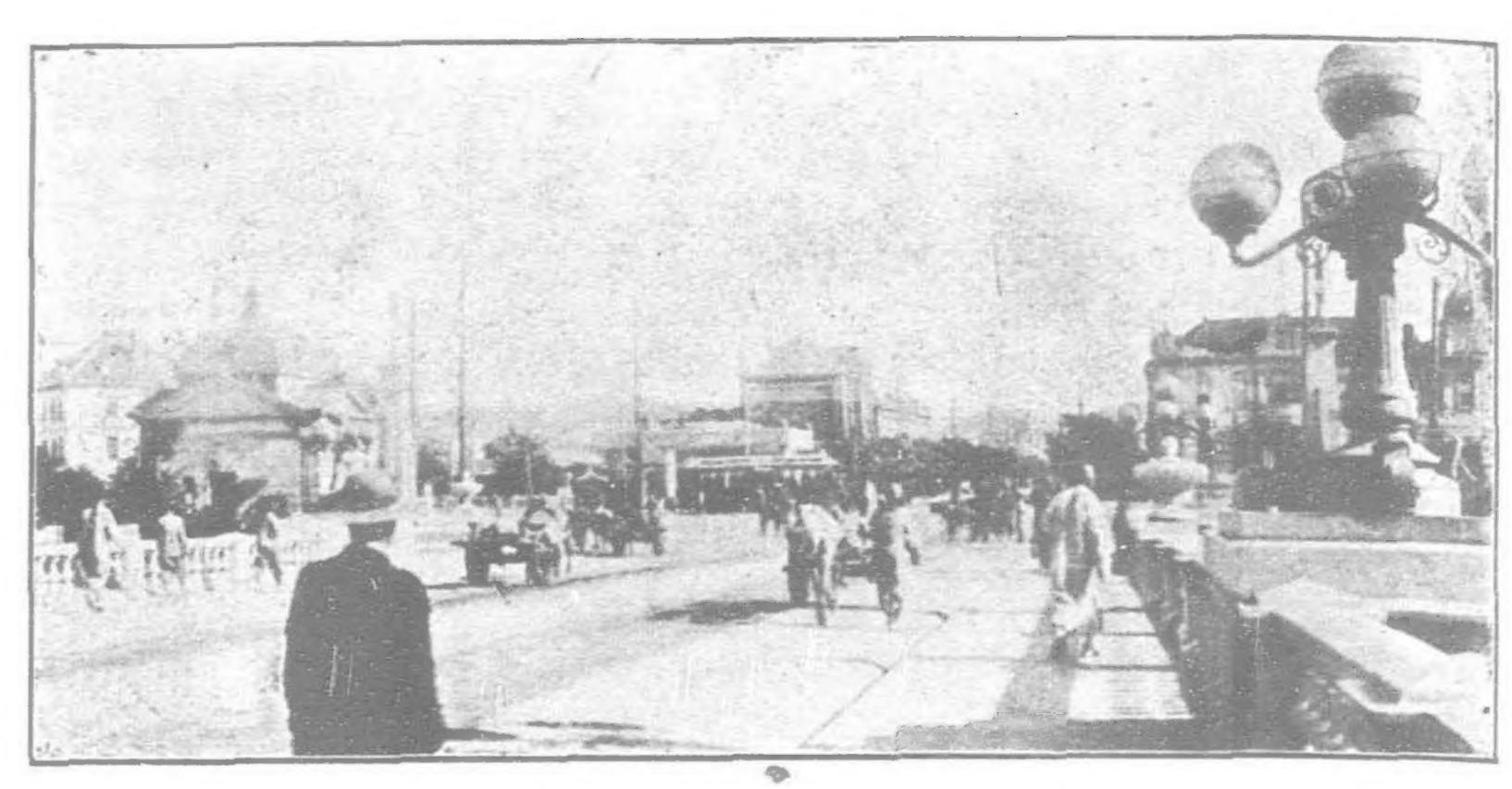
It is understood that restriction does not apply to the railway in the territory affected by the lease of the Liaotung Peninsula.

The Imperial Governments of Japan and Russia, with a view to promote and facilitate intercourse and traffic, will as soon as possible conclude a separate convention for the regulation of their connecting railway services in Manchuria.

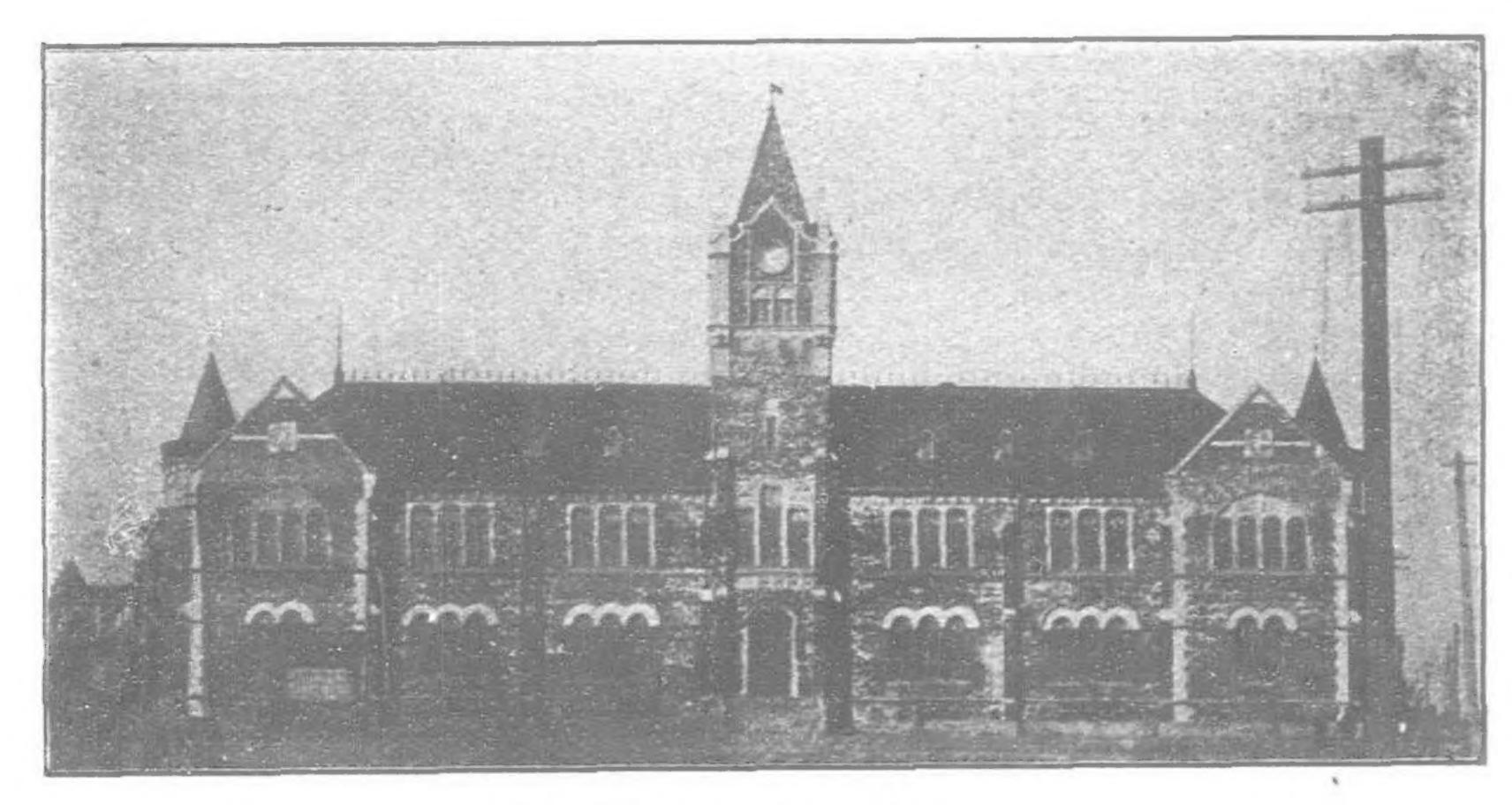
As a corollary to the Portsmouth Treaty a Treaty was signed in Peking on December 22, 1905, by China and Japan, definitely arranging points touched upon in the Portsmouth Treaty. To the Treaty it is said that a secret Protocol was attached containing sixteen articles dealing with the South Manchuria Railway, one of the articles being that the Chinese Government should not, with the object of protecting the interests of the South Manchuria Railway, construct prior to the recovery by them of the said railway, any main line in the neighbourhood of and parallel to that railway, or any branch line which might be prejudicial to the



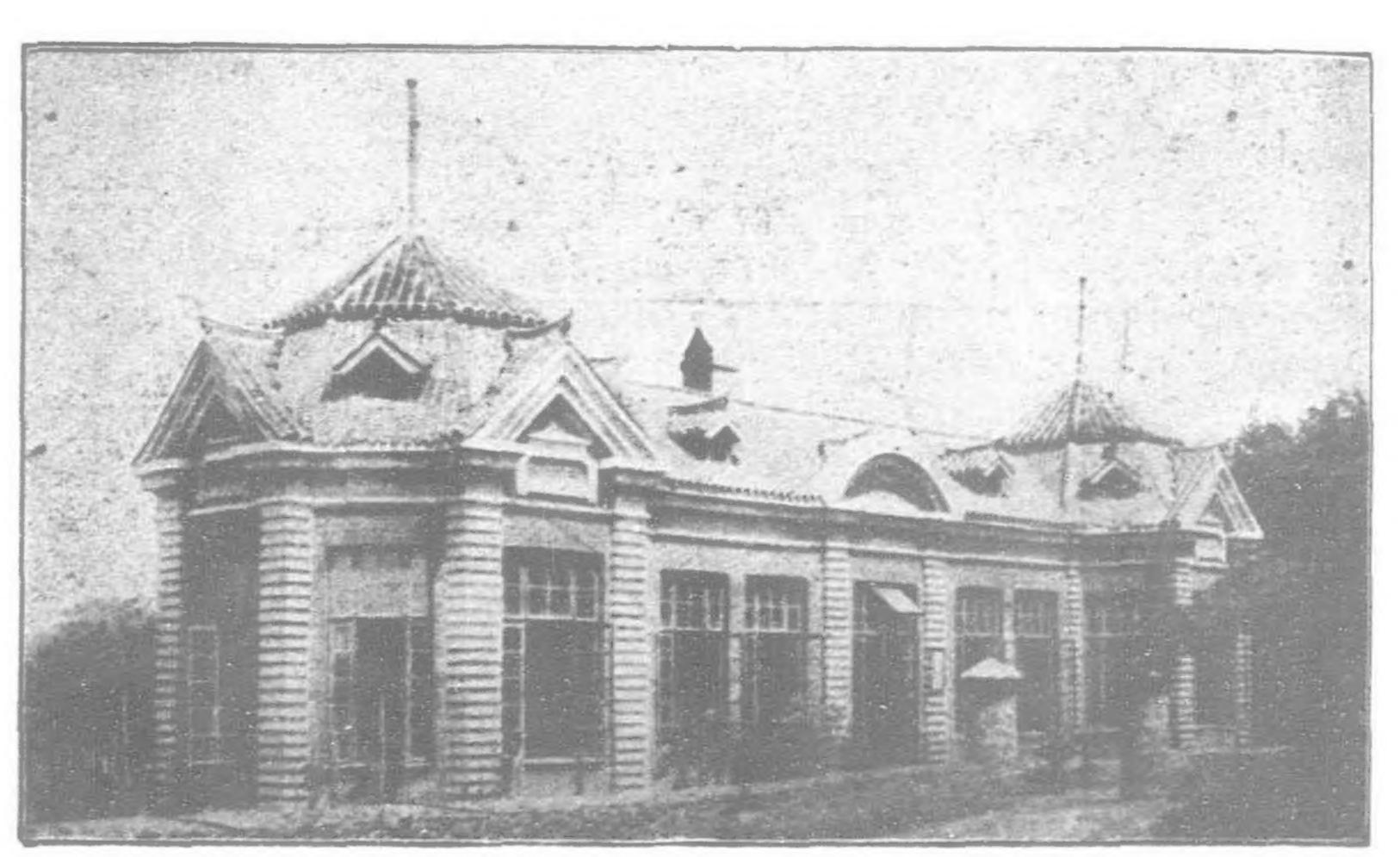
Nippon Bridge at Dairen.



View Across Nippon Bridge.



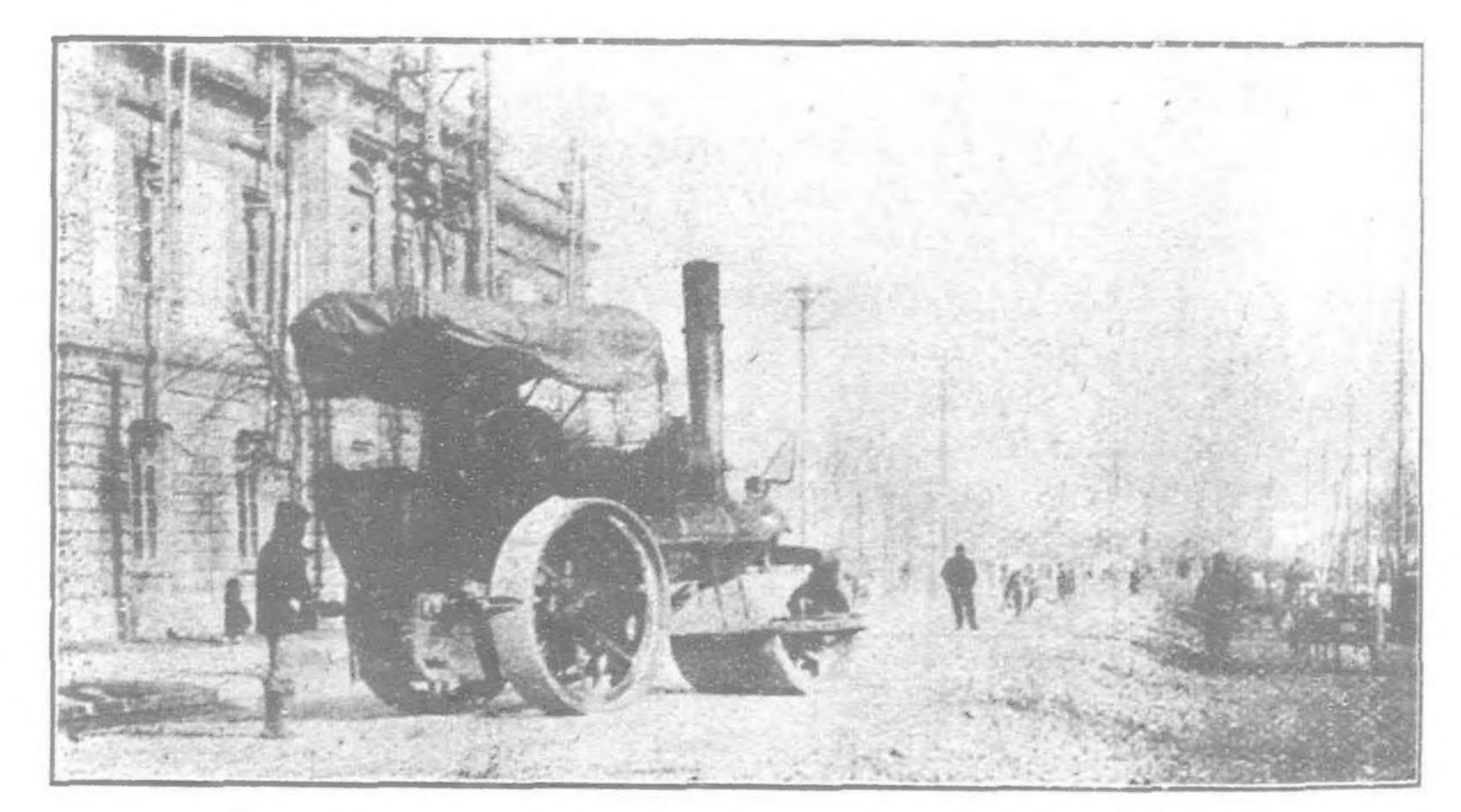
Civil Administration Building.



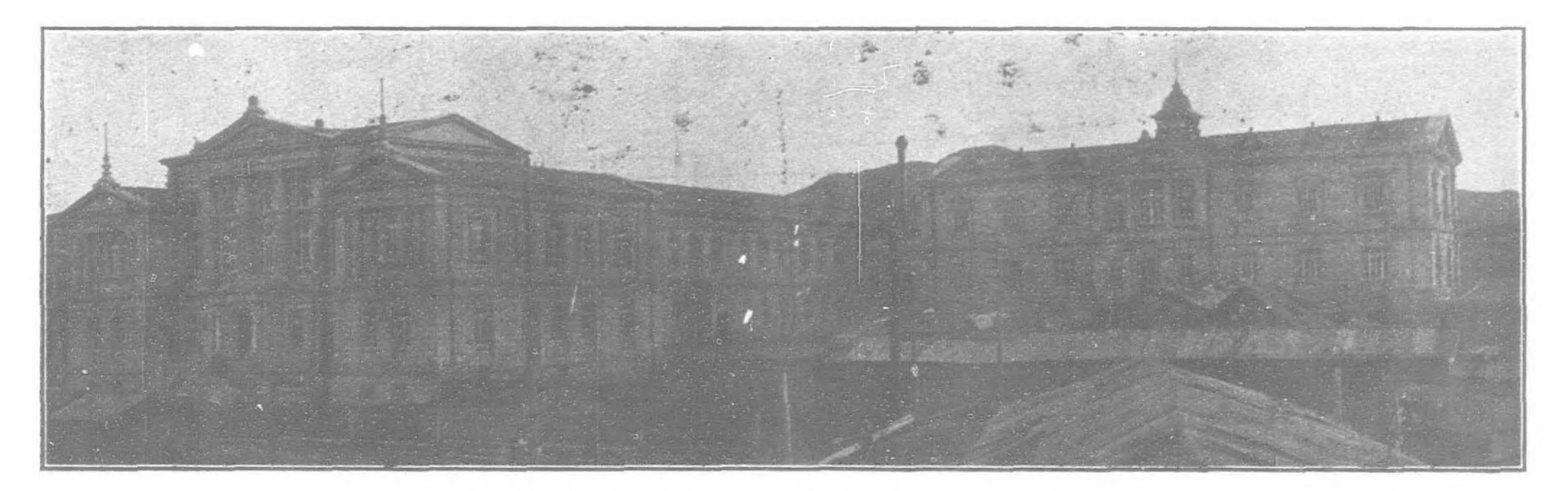
Laboratory Building, Dairen.



Kambu Street, Dairen.



Road Making, Dairen.



General Offices of South Manchuria Railway, Dairen.

made to prevent the building of other railways by American and British interests. Another point in the Treaty which also ultimately developed into a warm wrangle, this time between China and Japan, was that giving Japan the right to maintain and work the military railway constructed between Antung and Mukden, which will be referred to later.

Japan was working for a thorough clearing up and adjustment of the railway questions in the territory over which she felt the was destined to dominate, and on April 15, 1907, she concluded another agreement with China for the purchase by China of the railway constructed by Japan between Hsinmintun and Mukden for Yen 1,600,000, and for the construction of a railway between Kirin and Changchun, which will be referred to later under that caption. Another agreement was signed in 1908 in which China agreed to extend the Kirin-Changchun railway to Yenchi and to connect it at Hoiryong with a Korean railway, and on the same date a further agreement was made settling other railway points, one being that the Chinese Government would not construct a railway from Hsinmintun to Fakumen without consulting Japan. On November 12, 1908, still another agreement was made with regard to the Kirin-Changchun railway, this time making provision for a loan for the work.

Mention of the Hsinmintun-Fakumen railway above brings us to a question which caused grave difficulties and involved the Japanese in hot newspaper controversy with British and American interests. It also afforded demonstration that undertakings in Treaties are not necessarily made with the object of ultimate fulfilment. For instance the Treaty of Portsmouth bound the signatory Powers "not to obstruct any general measures, common to all countries, which China may take for the development of commerce and industry in Manchuria," yet Japan subsequently secured from China, as mentioned above, the agreement not to build any railway which might be detrimental to the South Manchuria Railway. This agreement with Japan jeopardised the rights of China which were fully protected by the Portsmouth Treaty, and Japan took full advantage of it when an agreement was entered into between the Governor of Mukden (Mr. Tang Shao vi) and Lord French, representing Messrs. Pauling and Company, of London, and Mr. J. O. P. Bland, representing the British and Chinese Corporation, for the construction and mancing of the Fakumen extension of the Imperial Railway of North China. Despite the torrent of abuse that flowed upon Japan from certain sections of the British and American press Japan was, however, able to have the agreement suspended, and thereby removed what would ultimately have proved a nasty thorn from her side.

America's Advent in Manchuria.

But to give a fuller understanding of the entrance of other interests into the preserves of Japan in Manchuria it may perhaps be as well to give a summary of the events as written by Mr. J. O. P. Bland in his excellent work, "Recent Events and Present Policies in China." Mr. Bland, at the time of the happenings, represented the British and Chinese Corporation in Peking, and therefore should be well-equipped to speak. A statement of his account of the events is as follows:

immediately after the signature of the Portsmouth Treaty the American Railway magnate, Mr. E. H. Harriman, concluded with Marquis Ito and Marquis Katsura, a Memorandum of Agreement for Joint American-Japanese ownership and working of the South Manchuria Railway, together with the various coal, timber and mining concessions which the Russians had extracted from Chinese officials. This joint working scheme, to be financed with American capital, was to form a link in Mr. Harriman's projected round-the-world trans-Portation system, but it came to nothing owing to the conclusion of the l'eking agreement of December 22, 1905, which put an end to the opendoor shibboleths of the Portsmouth Treaty. Upon the conclusion of that agreement Count Komura telegraphed to Tokyo and Mr. Harriman was duly informed that the Chinese Government would not consent to the admission of American capital to the South Manchuria Railway system, desiring themselves, in due course, to join the Japanese in working it! In the light of subsequent events, however, we are institled in concluding that Count Komura, fully appreciating the actual strength of his country's position and the probable tendency of world's politics in the future, thought it advisable to keep Manchuria free from American "entanglements" and the prospects of joint control. As events proved, Japan had no difficulty in raising in England the capital required for the restoration of the South Manchuriz Railway; and

with characteristic savoir faire, she spent a considerable part of this loan in purchasing railway equipment in the United States. No more was heard, for the time being, of Mr. Harriman's scheme, but the idea was germinating, nevertheless, at the State Department, and was to bear its fruit in due season.

In the summer of 1906 Russian officials connected with the Chinese Eastern Railway approached American capitalists with a proposal to sell that line, and negotiations of a desultory kind proceeded at intervals until the autumn of 1909, when Mr. Secretary Knox's "neutralisation scheme" completely changed the situation and precipitated the Russo-Japanese entente.

In the meanwhile, the Chinese Government, represented by Mr. Tang Shao vi, realising the significance of Japan's disinterested friendship, was endeavoring by all possible means to enlist the active sympathy and support of the United States and Great Britain in Manchuria, by offering opportunities for railway construction to American and English capitalists and contractors.

The Chinchow-Aigun Railway Scheme.

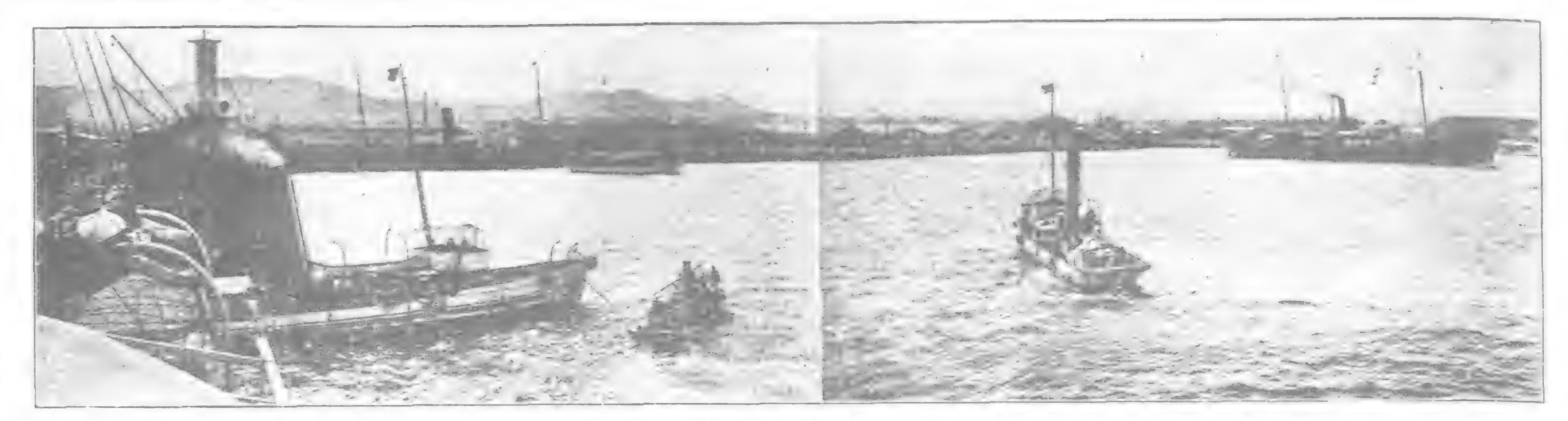
In August, 1907, he arranged with Mr. Willard Straight, then United States Consul-General at Mukden, a project for the creation of a Manchurian Bank, financed by American capital, to be the financial agent of the Manchurian Government, and to undertake the construction (in co-operation with Messrs. Pauling and Co., the British railway contractors) of a line from Hsinmintun to Aigun, and other important enterprises. Owing to the mancial panic prevailing in the United States the project was delayed, but in the summer of 1908 Mr. Straight took with him to Washington a Memorandum signed by the Governor of Mukden, which was to form the basis of negotiations for a loan of £20,000,000 for the establishment of the Manchurian Bank. In the meanwhile, subject to financial arrangements, the Manchurian Government had concluded an agreement with Lord French, representing Messrs. Pauling and Co., for the construction of a railway running southwards from Tsitsihar to connect with the Imperial Railways of North China. The Manchurian Bank was to undertake, with American capital, the extension of this line from Tsitsihar to Aigun. For the satisfactory completion of projects of such magnitude it was necessary that a competent and responsible representative of China should discuss the details in person in Washington and New York. Tang Shao-yi was therefore appointed on a special mission to America and left Peking on September 24, and arrived in Washington on November 30. At the beginning of November Mr. Harriman's bankers, Messrs. Kuhn, Loeb and Co., had signified to the State Department their readiness to undertake to finance the Manchurian Bank, if satisfactory terms could be arranged.

On the day that Tang Shao-yi arrived in Washington the American Government exchanged Notes with the Japanese Ambassador at Washington recording the desire of both Governments "to encourage the free and peaceful development of their commerce on the Pacific Ocean," their firm determination 'to support, by all pacific means at their disposal, the independence and integrity of China and the principle of equal opportunity," and their intention to "maintain the status quo in the region above mentioned." The death of the Emperor of China, Kuang Hsu, on November 14, followed the next day by the death of the Empress Dowager, doomed the mission of Tang Shao-yi and he was recalled to China on January 8. In December he was consulted by American capitalists regarding the proposals in connection with the Chinese Eastern Railway, which the Russian Government was willing to sell if Japan would agree to sell the South Manchuria Railway, Tang Shao-yi said that China would welcome the scheme. He hoped that an international syndicate might be organised to purchase both railways on behalf of the Chinese Government, thus anticipating the provision for their repurchase contained in the Russo-Chinese Railway agreement of 1896. This was the germ of Mr. Knox's "neutralisation scheme." Before the idea could develop, Mr. Harriman died and the plans died with him.

Mr. Knox's Neutralisation Scheme.

On October 2 the Chinese Government, strongly urged by American financiers, signed a preliminary agreement for the construction of the Chinchou-Aigun railway, and things were at this stage when Mr. Secretary Knox in November broached to the British Government his scheme for the neutralisation of the Manchurian railways. The moment chosen and the manner of its presentment, were equally unfortunate. The British Government expressed its guarded acquiescence in the principles advocated provided that the Powers concerned were favorably disposed. Mr. Knox, however, assumed that the British attitude was equivalent to moral support and proceeded to submit his scheme simultaneously to the British, French, German, Russian, Japanese and Chinese Governments. Diplomatically speaking, his procedure in this matter was a serious blunder, in that he failed, in the first instance, to consult the Powers chiefly concerned, Russia and Japan.

The purport of Mr. Knox's scheme amounted to a proposal that the Powers addressed should authorise the organisation of an international syndicate to buy out the Russian and Japanese railway interests in Manchuria, and it was suggested that if the Powers were unwilling to join in the general neutralisation scheme they should at least unite in the financing and construction of the Chinchou-Aigun railway. The presentation of this second proposition overlooked the vital fact, Mr. Bland points out, that by the Portsmouth Treaty China was strictly entitled to use her own discretion in the development of her commerce



Fanoramic View of Wharves at Dairen.



Sacked Beans Awaiting Shipment at Dairen.



Ranway Employees' Quarters at Danier.



South Manchurian Railway's Experimental Bean Mill.



Stacks of Kiaoliang.



Bridge near Dairen.

and industry in Manchuria. It was imperative in China's interests that the two questions should be treated separately. Mr. Rockhill, then Imerican Ambassador at St. Petersburg, realised this fundamental fact and presented to the Russian Government only the neutralisation scheme. The Russian Government, learning of the second proposition through its Ambassadors, naturally jumped to the conclusion that the American Government was playing a double game-of which Mr. Knox was constitutionally incapable. Their suspicions thus aroused. the neutralisation scheme was doomed and the Russo-Japanese entente to divide Manchuria and Mongolia began from this moment to assume definite form and substance. The American Government's policy was. Mr. Bland emphasizes, irreproachable and just; but it erred in assuming, as usual, a restraining virtue in Treaties and Conventions. Everything depended upon separating Russia from Japan; everything was done to irritate Russian sensitiveness and to lay the foundations of the predatory pact which has since dominated the Far Eastern situation. The immediate result of the scheme was the Russo-Japanese agreement of July 4, 1910.

The Withdrawal of America.

There remained nothing for the Americans to do but to proceed independently in the matter of the Chinchou-Aigun railway, the final detailed agreement for which was completed in April, 1910, and protested against by Japan and Russia. It was denounced as a deep laid plan for attacking Russian territories in Fastern Siberia and Russia's special interests in Mongolia and Manchuria. The pledge given in the Portsmouth Treaty by Russia and Japan alike, not to exploit their existing railways for strategic purposes was deliberately repudiated and an intimation was plainly conveyed to the Waiwupu that the joint protests against the Chinchou-Aigun scheme were based on considerations of political and strategical expediency. The Vicerov of Manchuria endeavored repeatedly to obtain assurances that the American Government would afford material assistance, if necessary, in the matter of the railway, given which the Chinese Government was prepared to proceed with its construction. But the United States were evidently not in a position to support China, single handed, to the logical conclusions of such an engagement. Mr. Knox's scheme had come up against the stone wall of hard facts. Benevolent theories, in Peking as in Fanama, are powerless against the forces of geographical gravitation.

Mr. Bland exhaustively deals with other Manchurian Development schemes and the effect of the Russo-Japanese entente, which readers who are interested would do well to peruse. Exigencies of space compel us to leave the matter with one or two of the author's conclusions.

Mr. Bland sums up that the appearance of the United States as a world Power on the crowded stage of the Far Fast has been characterised by vigorous initiative and sound political instincts, hampered by lack of saroir-faire and an almost crude naivety of diplomatic procedure at the State Department. To America, nevertheless, must be given credit for appreciating the essential facts of the situation and the courage to face them. Taking a broad view of the future of world politics in the Far East, it would seem that America may vet have cause to recognise that the movement of Iapanese expansion in Manchuria and Mongolia is preferable to its activities in Chili, Peru, and Brazil. From the American point of view the potential trade of China is undoubtedly worth defending by every possible device of diplomacy; but the crux of the situation lies in the fact that Russia and Janan are both well aware that it is not worth the sacrifices of a war. If China's "rights recovery" programme is, as we believe, a vain dream, then treaties and conventions notwithstanding, Janan will extend her Empire westwards on the Asiatic continent at China's expense. As it was with Korea so it must be with any desirable territories to the north and west of the Great Wall, which China cannot defend by force of arms.

And finally Mr. Bland ventures on a prophecy which China at this moment is curiously watching to see if it will be fulfilled.

The facts just anoted once recognised, he writes, and the advantages admitted of diverting Japanese expansion westwards, all the assurances and shibboleths now current in regard to the maintenance of China's integrity will be decently and quietly folded away, as they were in Korea—exchanged for practical bargainings as to the maintenance of existing tariffs, and a door left temporarily open to international trade. For, with America as with Japan and every other Power of the modern world, the gospel of necessity is greater, in the end, than any international obligations

New Japanese and Russian Projects.

The departure of America from the Manchuria field was evidently regarded as comp'ete by Japan despite the fact that those concerned had notified China that they adhered to their right in the agreement for the construction of the Chinchou-Aigun railway. The adherence was, it would appear, merely academic, for in 1913 Japan began to test just what American feeling would amount to in regard to that projected line. The test was the opening of negotiations with China for the construction of railways in Eastern Inner Mongolia. Newspapers both in China

and Japan published information of Japan's desires, but nothing in the shape of a protest emanated from America when it became known that the railways which Japan purposed constructing practically followed the route, or a great part of it, which would have been covered by the Chinchou-Aigun railway.

Japan, in short, negotiated for, and came to an understanding about, a railway virtually from Jehol to Taonanfu, and from that city to the South Manchuria Railway either at Shihpingkai or Changchun. At the same time, too, for a line to connect Kaiyuan with Hailungcheng. A railway from Taonanfu to Jehol would, of course, cover the southern section of any line from Chinchou to Tsitsihar and Aigun, but this notwithstanding, neither the British, who were interested owing to Messrs. Pauling and Co's connection with it, nor the Americans, raised a murmur of dissent, an attitude which could indicate nothing but that they were ready to recognise the inevitable fact that Japan could not be restrained. Messrs. Pauling and Co., were, however, now interested in another railway south of the Yangtsze, that from Shasi to Shingyifu, and were content to relinquish any claims to the Chinchou-Aigun agreement.

America's quiescent attitude was, however, significant, and was unexpected by Japan and Russia. Both felt that a revival of the old Chinchow-Aigun controversy was certain, and when it did not develop they regarded it as obvious that the State Department had lost interest in the Manchurian question entirely. And Russia did not realise the fact with regret. Her representatives promptly renewed negotiations with the Chinese Government for an extension of the Russian railway system in North Manchuria, and ultimately came to an understanding with the Government for the right to construct a railway from Blagoveshchensk on the north bank of the Amur River to Aigun on the south bank. thence to Mergen (about half way to Tsitsihar), thence to Harbin. What is talked of as "a branch line" will also connect Mergen with Tsitsihar and the Siberian railway. This scheme will cover the northern section of the proposed Chinchou-Aigun railway, and the only gap unprovided for by the schemes of Japan and Russia is that small section between Taonanfu and Tsitsihar, a matter of easy and natural adjustment when the time arrives.

These projects completely put the Chinchou-Aigun proposal out of court, and as America has objected to neither it must be taken for granted that she is content to permit her claims to go by default. The Russian scheme will give Russia complete railway dominance in the north of Manchuria, an understanding arranged with Japan prior to the European war, and the Japanese gains in Manchuria as a result of the negotiations now proceeding, combined with the projects in Eastern Inner Mongolia, render her position secure there, at least for the time being. Putting politics aside the result will be an adequate development of a vast and rich region, the only regrettable feature being that China has been unable to take advantage of the well-meant efforts that have from time to time been made to help her retain dominance for her own national advantage.

The South Manchuria Railway Co.

The terms of the Peking Protocol, previously mentioned. which refer to the South Manchuria Railway have been kept secret, but acting upon them the Japanese Government took steps to form the South Manchuria Railway Company to operate the railway, mines and other industries. On June 7, 1906, therefore, an Imperial Ordinance was issued concerning the establishment of the Company, and on July 13 of the same year General Viscount G. Kodama was appointed President of the Organization Committee which was composed of 81 members. Viscount Kodama died before he was able to take up the work and Viscount Terauchi, Minister of War, assumed the presidency on July 25. On August I the Government forwarded the Committee the conditions pertaining to the establishment of the Company and on August 18 the Government approved the Articles of Association. The subscription for shares took place from September 10 to October 15, and the establishment of the Company was finally sanctioned by the Minister of Communications on November 1. The Board of Directors is composed of one President, one Vice-President, and at least four Directors. in addition to whom the Company has from 3 to 5 Auditors. Both the President and the Vice-President are appointed by the



Panoramic view of Dairen.



New Foreign Quarter of Dairen.



South Manchuria Railway Terminus, Dairen.

Government with Imperial Sanction; the Directors are also appointed by the Government from among shareholders owning at least 50 shares, while the Auditors are elected at the general meeting of shareholders. Baron S. Goto was appointed the first President of the Company. The head office and headquarters of the Company were established at Dalny, and a branch office was opened in Tokyo.

The authorised capital of the Company is two hundred million yen, which is divided into one million shares of 200 yen (about £20) each. The Japanese Government owns half of the total authorized capital, viz., one hundred million yen, which is its share for handing over to the Company the complete railway lines in Manchuria with the properties attaching thereto (except the rolling stock and the rails and accessory materials on the Antung-Mukden railway) and the coal mines of Fushun and Yentai-altogether of an assessed total value of one hundred million ven. The other half, namely, one hundred million yen, may be subscribed for and taken up by the Chinese Government and Japanese and Chinese subjects only; and the shareholders are guaranteed a dividend of 6 per cent. per annum by the Japanese Government. Owing to the economic conditions in Japan at the time of the establishment of the Company the first issue of shares was limited to the amount of twenty million yen, of which only onewas called up. But, as the enterprises of the Company advanced, necessity arose to raise funds by other means than debentures, and the Company made another call in 1912 of sixty ven per share, amounting to six million yen. The shares not yet issued amount to eighty million yen, while the share capital subscribed but not yet paid up is twelve million yen.

On April I, 1907, the Company began its business, having on the same day taken possession of the following properties, which constitute the investment of the Company:—

1.—The railway lines between Dairen (Dalny) and Changchun; Tafangshen and Liushutun (now in operation); Nankuanling and Port Arthur; Tashihchiao and Yingkou; Yentai on the main line and the Yentai coal mine; Suchiatun and Fushun coal mine; and Antung and Mukden.

2.—The machinery, implements, and other materials actually in use on the above railways and mines, and also on the railway line between Mukden and Hsinmintun.

3.—The properties in land, buildings, and other establishments both within and without the Kwantung Leased Territory, belonging to the above railways and mines.

The Mukden-Hsinmintun Railway, and all appurtenances, was ceded to the Chinese Government by an agreement entered into on April 15, 1907, its actual transfer taking place on June 1, of the same year; and in fulfilment of an agreement entered into in June, 1907, with the Russian Government at St. Petersburg, the railway lines and properties to the south of Kwanchengtzu station, together with the coal mines of Shihpeiling and Taochiatun and their appurtenances, were formally transferred to the South Manchuria Railway Company between July 15 and July 18, 1907.

With the object of raising, largely through debentures, the funds required for the construction of these railways, as well as for the subsidiary undertakings, the Company at various times floated in London by three separate issues of debentures a total amount of £8,000,000 sterling at the uniform rate of interest of 5 per cent., both capital and interest being guaranteed by the Japanese Government. The following debentures were thus issued:—

1st issue: £4.000,000 sterling issued on July 19, 1907, redeemable within 25 years.

2nd issue: £2,000,000 sterling, issued on June 1, 1908, redeemable within 3 years.

3rd issue: £2,000,000 sterling, issued on December 16.

Partly to meet the increasing demand for expenditure consequent upon the progress of the Company's enterprises, and partly to repay the notes for £2,000,000 falling due on June 1, 1911, it became necessary to float debentures a fourth time in London. Therefore subscription for £6,000,000 sterling 4½ per cent. bonds (subscription price 98 per cent., repayable on January 1, 1936, the repayment of principal and interest being

unconditionally guaranteed by the Imperial Japanese Government as before) was opened on January 3, 1911, and closed on January 5.

The present debentures of the Company are:— £6,000,000 5 per cent. sterling bonds. £6,000,000 $4\frac{1}{2}$ per cent. sterling bonds. Total £12,000,000 = Gold Yen 117,156,000.

The railways acquired from the Government of April 1, 1907, were as follow:—

The main line between Dairen and Changchun 437½ miles. The Port Arthur branch line 28.8

The Liushutun branch line 3.6

The Yingkou branch line 13.4

The Yentai branch line 9.7

The Fushun branch line 38.9

The Mukden-Antung line (189 miles by light railway) now, by standard gauge 170.7

The gauge of the whole of the above railways when acquired by the Company from the Government was 3ft. 6in., with the exception of that of the Antung-Mukden line, which was only 2ft. 6in. This, however, does not include the line from Mukden to Hsinmintun, which, though originally included in the system acquired by the Company, was ceded to China, as already mentioned.

Immediately after the acquisition of these railways the Company commenced, and, without the slightest interruption of traffic, executed their reconstruction to the standard gauge of 4ft. 8\fin.—except the Antung-Mukden line—and also the doubling of the track between Dairen and Suchiatun, a distance of 2381 miles. So expeditiously was this performed that as early as November, 1907, traffic on the standard gauge was opened on the Port Arthur line, and on June 1, 1908, the entire main line, as well as the Fushun and Yingkou branch lines, had been rebuilt and completed. In spite of adverse circumstance of every kind consequent upon the war with Russia the engineers of the Company succeeded in widening the gauge on more than 500 miles of railway line, at the same time erecting more than 200 locomotives and 2,500 cars newly received from abroad, thus making it possible for the Company to effect the change to standard gauge practically without interruption of traffic for n single day and without the slightest obstruction.

The Yinkou branch line, which formerly had its terminus at Niuchiatun, was also extended as far as the centre of the Japanese town of Yingkou, where a new station was built and opened for passenger traffic in November, 1909, the old station being utilised as a goods office.

The reconstruction of the Yentai branch line, which became necessary in consequence of the increased output of the Yentai coal mine, was also completed on January 7, 1910, and on March 11, 1910, goods trains commenced to run between Liaoyang and the Yentai coal mine.

Originally a central railway workshop was erected in Dairen for the construction of rolling stock, repairs, and other works, not only to meet the requirements of the Company but those from outside. Besides the central workshop, small workshops for the repair of rolling stock, machinery, and implements were established in Liaoyang, Kungchuling, and Antung. However, as these workshops soon proved to be altogether too small and insufficiently equipped to cope with the ever-increasing demands it was decided to erect new and in every respect modernly equipped workshops on an extensive scale at Shaokou, near Dairen; and this scheme was commenced towards the end of 1908 and completed on August 9, 1911, together with house accommodation for 1,800 workmen and their families.

In addition to the railways, which undoubtedly are the best equipped in this part of the world, the Company conducts other enterprises including shipping, harbour affairs, coal mines, electrical works, gas works, hotels, and experimental laboratories. All are controlled with the degree of thoroughness which now is familiarly associated with Japanese concerns, and in every respect Japan can be honestly congratulated upon the remarkable efficiency that has been attained in the enterprises which she has taken over or developed in Manchuria.

From time to time the FAR EASTERN REVIEW has published illustrated descriptions of the various enterprises of the Company,



View of Kirin, Showing Sungari River.



Seventy Foot Cut at Santoliu.



Tumenling Pass on Kirin-Changchun Railway.



Bridge at Huapichuan on Kirin-Changchun Railway.



Eastern Side of Tumenling Pass.



Long Tangent on Kirin-Changchun Railway near Kalun.

and it is only intended here briefly to record the progress achieved since the taking over of the enterprises from the Russians.

A Convention relating to the Japanese and Russian Railway connection in Manchuria was signed at St. Petersburg on June 13, 1907, to conform with the provisions of Article VIII of the Portsmouth Treaty. The Convention arranged for the junction at the Kuanchengtze station and for the establishment of direct communication for passengers and for merchandise, and also all the necessary installations in order to effect in the shortest time and with the least expense possible, the transport of the merchandise at the terminal stations, made necessary by the difference in the width of the gauges.

A Protocol to the Convention was made to settle 'certain questions relative to the terminus of Kuanchengtse and to the coal mines of Shibelin and Taokiatun." Article 1 states:

It has been agreed between the two high contracting parties that in principle the terminus of Kuanchengtse and its appendages are the common property of Japan and Russia, but that for the sake of practical convenience, the exclusive ownership of the said terminus and of its appendages shall remain with Russia, and that for it the Russian Government shall pay to the Japanese Government a sum of 560,393 roubles in virtue of compensation for the renunciation by Japan of her rights of co-ownership of the Kuanchengtse terminus and its appendages.

Article 2 dealt, inter alia, with the transfer of the coal mines at Shibelin and Taokiatun with all their appendages.

A further convention was signed at St. Petersburg on July 4, 1910, to develop the effects of the former one. The high contracting parties mutually agreed to lend to each other their friendly co-operation "with a view to the amelioration of their respective railway lines in Manchuria and the improvement of the connecting service of the said railways and to abstain from all competition prejudicial to the realization of this object." In Article II of the Convention they engage "to maintain and respect the status quo in Manchuria resulting from the treaties, conventions and other arrangements concluded up to this day between Japan and Russia or between either of those two Powers and China."

In addition to this convention special traffic agreements have been made between the two Companies and as a result efficient passenger services have been conducted to and from the Far East and Europe, the only inconvenience being the necessity for passengers to change trains, owing to the difference in gauge, at Kuanchengtse. The service has materially reduced the time of a journey either to or from Europe, and passengers always speak in the highest terms of the facilities provided for the long railway journey.

The South Manchuria Railway in particular caters in the best manner possible for passengers, and has earned the reputation of conducting a service second to none in the world. Whatever the politics that may be involved in this railway matter the fact remains that the world has gained by it, and the extension of the lease to 99 years as agreed to by the Chinese at the conferences now sitting added but nineteen years to the term that was to run.

The Antung-Mukden Railway.

By acquiring an extension of the agreement of the Antung-Mukden Railway, which expires in 1923, to 99 years, Japan is able to bring this hitherto much disputed concern into line with the South Manchuria Railway so far as the term of possession is concerned. It was hurriedly constructed by Japan purely as a military railway during the war with Russia, and covered a distance of some 189 miles, the gauge being a narrow one of 2½ feet. After the war China pressed for the removal of the line, but Japan had other ideas and countered the Chinese proposals by demanding the right to reconstruct the railway for commercial purposes. In the agreement signed at Peking on December 22, 1905, as a corollary to the Portsmouth Treaty, Article VI dealt with this railway as follows:

The Imperial Chinese Government agrees that Japan has the right to maintain and work the military railway line constructed between Antung and Moukden and to improve the said line so as to make it fit for the conveyance of commercial and industrial goods of all nations. The term for which such right is conceded is fifteen years from the date of the completion of the improvements above provided for. The work of such improvement is to be completed within two years, exclusive of a period of twelve months during which it will have to be delayed

owing to the necessity of using the existing line for the withdrawal of troops. The term of the concession above mentioned is therefore to expire in the 49th year of Kuang Hsu. At the expiration of that term, the said railway shall be sold to China at a price to be determined by appraisement of all its properties by a foreign expert who will be selected by both parties. The conveyance by the railway of the troops and munitions of war of the Chinese Government prior to such sale shall be dealt with in accordance with the regulations of the Chinese Eastern Railway. Regarding the manner in which the improvements of the railway are to be effected, it is agreed that the persons undertaking the work on behalf of Japan shall consult with the Commissioner despatched for the purpose by China. The Chinese Government will also appoint a Commissioner to look after the business relating to the railway as is provided in the Agreement relating to the Chinese Eastern Railway. It is further agreed that detailed regulations shall be concluded regarding the tariffs for the carriage by the railway of the public and private goods of China."

Against the fulfilment of this agreement China interposed obstructions regarding reconstruction and policing, and on June 24, 1909, sent a note to Japan disagreeing to the widening of the gauge, and raising other points. Japan then decided to adopt a strong attitude and on August 6 notified the Chinese that she intended to reconstruct the line, despite what the Peking Government might say or do. On August 13 the Chinese Government replied and from that reply the Japanese Government were justified in assuming that China was fully prepared to recognize the immediate necessity of reconstructing the line and that she desired to render all necessary co-operation in carrying out the undertaking. The Japanese Government thereupon instructed Consul-General Koike, at Mukden, to sign a Memorandum with Viceroy Hsi Liang and Governor Cheng to the following effect:—

1.—The same gauge as that of the Peking-Mukden Railway shall

be adopted.

2.—Both Japan and China shall recognize and approve, on the whole, the line as already surveyed and agreed to by the Commissioners of the two Governments, but the location of that portion of the line from Chen-hsiang-tun to Mukden shall remain to be decided by mutual conference between the two countries.

3.—On and from the date when the Memorandum is signed, negotiations for the purchase of land and for the adjustment of all

other details shall be instituted.

4.—From the day following the signing of the Memorandum, that is from the day after the negotiations above mentioned are instituted, the work of reconstruction shall be accelerated.

5.—China shall instruct the local officials along the line to give

every facility regarding the execution of the work.

It is significant that not one official protest was raised by any Power against Japan's move, and it disclosed the fact that China had alienated her best friends and stood alone.

The reconstruction of the line was recommenced in August, 1909, and proceeded so rapidly that the Mukden-Shihchiaotsu section (35 miles) was opened for traffic on November 3 of the same year; the Antung-Chikuanshan section on November 3, 1910; the Shihchiaotsu-Penhshiu section on January 15, 1911, and the remaining section from Penhshiu to Chikuanshan (73 miles), notwithstanding considerable engineering difficulties that had been almost constantly met with, so remarkable a progress was made that the whole work was completed on November 1, 1911, on which day was celebrated the completion of the conversion of the whole line. At the same time the Company made an arrangement with the Chosen (Korean) Railway for through express passenger service.

On November 2, 1911, an agreement was made to settle points connected with the effecting of direct traffic connections between the Antung-Mukden and the Korean railways. In this agreement it was stipulated for railway purposes that the centre of the bridge over the Yalu River should be regarded as the boundary line between Korean and Chinese territory.

Hsinmintun-Mukden and Kirin-Changchun Railways

China being desirous of acquiring the railway constructed by Japan between Hsinmintun and Mukden, to link up with the Peking-Mukden system, and Japan being desirous of extending her railway influence eastwards from Changchun to Kirin and beyond, an agreement was come to between the two parties with regard to the former two on April 15, 1907, and a further one regarding the Kirin-Changchun line on August 12, 1909. The Chientao Convention, signed later, also refers to the extension of the Kirin-Changchun Railway eastwards to Korea.



Kirin-Changehun Railway Offices,



First Class Station on Kirin-Changchun Line.



Beans Awaiting Transportation.



Sacking Beans at Changelain.



Storehouse at Changchun,

Acting on the agreements concluded with regard to the Kirin-Changchun railway, work was commenced in February, 1910, and traffic was opened in October, 1912. The Capital was Tls. 3,000,000. The line is 80 miles in length, and the gauge is the standard one.

The agreement signed on April 16, 1907, is as follows:—

Consuke Hayashi, Envoy Extraordinary and Minister Plenipotentiary of Japan, and Na T'ung, Ch'u Hungchi and Tang Shao-i, Ministers of the Imperial Chinese Board of Foreign Affairs, having been appointed thereto by their respective Governments, have agreed upon the following articles:

1.—The Chinese Government being desirous of purchasing the Hsinmintun-Mukden Railway, constructed by Japan, hereby agrees that the purchase price thereof shall be Japanese gold yen 1,660,000, to

be paid through the Yokohama Specie Bank at Tientsin.

The status of this railway shall be changed by the Chinese Government to that of the lines built by China herself, and it is agreed that one-half of the capital needed for that part of the line east of the Liao River shall be borrowed from the Southern Manchurian Railway Company.

2.—The Chinese Government, being about to construct a railway line herself from Kirin to Kwangchengtze, agrees to borrow from the aforesaid Company one-half of the capital needed for this work.

- 3—The conditions of the loans provided for in Articles I and 2, with the exception of the periods within which they are to be repayable, shall be in all respects similar to those of the Loan Contract of the railways inside and outside Shan-hai-kuan. The most important conditions are mentioned below. The regulations for the management of the railway line shall correspond with the methods at present employed by the General Office of the railway lines inside and outside Shan-hai-kuan.
- (a) The periods within which the loans shall be repaid shall be for that part of the Hsinminting-Mukden line east of the Liao River, eighteen years, and for the Kirin-Kwangchengtze line twenty-five years.

No repayment in full of these loans shall be allowed before the expiration of the periods named.

(b) The security for the loan from the Southern Manchurian Railway Company for that part of the Hsinmin-Mukden line east of the Liao River shall be the real property of the aforesaid section and its earnings.

The security for the mercantile shares to be issued by the Kirin-Kwangchengtze Railway Administration, as well as for the loan to be made from the Southern Manchurian Railway Company, shall be the real property of the said railway and its earnings.

So long as these loans are not repaid by the Chinese Government, the aforesaid property and earnings of the above-named lines shall not

be pledged as security for any other loan.

During the periods of these loans the Chinese Government agrees that the buildings, machinery, rolling-stock and road bed of the section of the Hsinmin-Mukden Railway east of the Liao River, and of the Kirin-Kwangchengtze Railway, shall be kept in good condition, and furthermore that such additions will be made to the rolling-stock from time to time as may be required to satisfy the demand of the traffic.

If the Kirin-Kwangchengtze line should hereafter build branch lines or an extension, the construction of such lines shall rest of right with the Chinese Government, but if there should be a lack of capital, application shall be made to the Southern Manchurian Railway Company for an arrangement. Should China, however, appropriate funds herself for the construction of any other railway lines than those mentioned, it shall not concern the Southern Manchurian Railway Company.

- (c) The loans and the interest thereon are guaranteed by the Chinese Government, and should there be any failure to make payment of interest or re-payment of principal at the proper periods, the Company shall at once notify the Chinese Government, which shall pay over to the Company the amount of the shortage. If the Chinese Government, after such notification by the Company, shall be unable to make good the dencit in the payments of principal or interest, the line in question with its real property shall be handed over to the temporary control of the Company until the shortage is made good, after which it will be returned to the control of the Railway Administration.
- If, however, the shortage be for a small amount only, an extension of time shall be granted as an accommodation, but never for more than three months.
- employed shall be a Japanese, and should there be an insufficient supply of Chinese for the various posts in the service of the railways, Japanese may be employed with the Chinese. It at any time it shall become necessary to change the Engineer in Chief, consultation must first be had with the (Southern Manchurian Railway) Company before appointment may be made. There shall also be appointed one Japanese Accountant, who must be thoroughly qualified, and who shall have entire responsibility for the arrangement and oversight of the various accounts of the railways, but in his supervision of receipts and expenditures he must consult and act with the Director-General.
- (e) The railways mentioned being Chinese Government lines, the latter shall have the right to transport soldiers and subsistence over

either line free of charge whenever military affairs or measures of relief shall require.

- (f) All earnings of the railways in question must be deposited in Japanese banks. As to the terms upon which such deposits shall be made, satisfactory arrangements shall be agreed upon by the parties concerned when the loan contracts are drawn up.
- 4.—The Chinese Government, immediately after the purchase of the present Hsinmin-Mukden Railway, shall enter into a contract with the Southern Manchurian Railway Company for the loan in connection with that section of the line east of the Liao River, and shall also appoint and direct a Chinese engineer to consult and act with the Japanese engineer in making a survey of the Kirin-Kwangchengtze line to furnish a basis for estimating the amount of the loan needed for the construction of the line, and within six months after the completion (of the survey) shall enter into a contract with the Southern Manchurian Kailway Company for the loan.

5.—The lines from Hsinmin to Mukden, and from Kirin to Kwangchengtze, under the management of China, must connect with the Southern Manchurian Railway line. The Tientsin-Shan-hai-kuan Railway Administration and the Southern Manchurian Railway Company shall appoint representatives to consult together and draw up the necessary regulations.

6.—The rate at which the loans specified in Articles 1 and 2 shall be issued, shall be determined fairly in accordance with the terms of the most recent loan negotiated by China with any foreign country.

7.—Within one month after the payment of the purchase price of the Hsinmin-Mukden Railway the Chinese Railway Administration shall appoint officers to take control of the sums.

Japanese Calendar, Meiji XLth Year, fourth Month, 15th Day. Chinese Calendar, Kuanghsu XXXIIIrd Year, Third Moon, 3rd

Day (April 15, 1907).

The following supplementary agreement concerning the Kirin-Changchun Railway was signed at Peking, November 12, 1908; and approved by Imperial Rescript of December 27, 1908, in reply to a Memorial of the Board of Posts and Communications.

According to Article IV of the Hsin-Feng (Hsinmintun-Mukden) and Chi-Chang (Kirin-Changchun) Railway Agreement between the two Governments of Japan and China, dated Ming Chih 40th year, 4th month, 15th day, Kuanghsu 33rd year, 3rd month, 3rd day (April 15, 1907), it was agreed that before settling the loan contract for the said railways, the two governments should draw up a supplementary agreement regarding matters not settled in the original agreement.

Now the two officials designated below have concluded the following agreement:—

Article I—It is agreed by Articles I and II of the Hsin-Feng and Chi-chang Railway Agreement between the Governments of Japan and China (hereafter to be called the "Agreement") that half of the capital needed for that portion of the Chin-Feng (Peking-Mukden) Railway lying east of the Liao River amounting to Yen 320,000, and half of the capital needed for the Chi-Chang Railway amounting to Yen 2,150,000 should be borrowed from the Southern Manchuria Railway Company.

Article II—The interest on this loan shall be at the rate of five per cent (5% per annum).

Article III—The actual rate at which the loan shall be realised shall be 93 for every 100 as agreed upon in Article VI of the Agreement.

Article IV—It is stipulated in Article III of the Agreement that during the term of the loan, the Chinese Government shall employ a Japanese Engineer-in-Chief for that portion of the Ching Feng Railway which lies East of the Liao River. For the present the Japanese Engineers now in the employ of the Chin-Feng Railway may continue to act and as at present will continue to be under the control of the Director and Engineer-in-Chief of the Chin-Feng Railway. If in future changes are made in the engineering staff, as provided in the Agreement, application shall be made to the Southern Manchuria Railway which will make appointments after full consultation. The status of these engineers shall be as stated above.

Article V—Since it is difficult for the Chinese Government to keep separate accounts for that portion of the Chin-Feng Railway which lies East of the Liao River, the Japanese Government consents that no Japanese accountants shall be specially appointed and the Japanese Government consents that the Chinese Government shall set aside monthly a sum calculated to be sufficient for the monthly payment of capital and interest on the amount of the loan for the said section of railway. This sum shall he deposited on the first day of every month in some Japanese Bank in China designated by the South Manchuria Railway Company. This deposit shall be regarded as a sinking fund for the redemption of the capital and interest of the loan when due. The manner of making the payments of the capital and interest of the loan when due, and the interest which shall be allowed by the Pank on the sums deposited shall be decided when the detailed loan contract is drawn up. The Chinese Government also consents that the monthly balance sheets for the whole Chin-Feng Railway line and the annual exact statement of accounts in English shall be sent monthly and annually to the South Manchuria Railway Company for inspection.

Article VI—The Engineer-in-Chief and the Accountants of the Chi-Chang Railway should all be Japanese as provided in Article III of the Agreement. The method of appointment shall be as follows: The Chinese Government shall select a well-trained and capable Engineer-in-Chief and appoint him after full consultation with the South Manchuria Railway Company. The Accountants shall be selected by the South Manchuria Railway Company and after consultation with the Chinese



Fushun Colliery, Operated by the South Manchuria Railway.



Barracks for Troops at Fushun.



View of Fushun.

Government the Chinese Government shall appoint them. If in future it shall be necessary to change the Engineer-in-Chief or Accountant, there must be consultation with the South Manchuria Railway Company according to the Agreement and the appointments must be made as arranged above.

Article VII—The Special Loan Contract must conform with the stipulations of the Agreement and of this Supplementary Agreement. It will be drawn up between the South Manchuria Railway Company and an official appointed by the Board of Posts and Communications. This Supplementary Agreement, will be in force when ratified by the two Governments.

Signed at Peking, Ming Chih 41st year, 11th month, 12th day, Kuanghsu 34th year, 10th month, 19th day (November 12, 1908), by

(signed) Moritaro Abe

First Secretary of Legation.

Liang Shih-yi,
Director of the Head Railway
Office of the Board of Posts
and Communications.

Article VI of the Chientao convention says:-

The Government of China shall undertake to extend the Kirin-Changchun Railway to the southern boundary of Yenchi, and to connect it with Hoiryong with a Korean railway, and such extension shall be effected upon the same terms as the Kirin-Changchun railway. The date of commencing the work of the proposed extension shall be

determined by the Government of China, considering the actual requirements of the situation, and upon consultation with the Government of Japan.

It is interesting to note that on July 11/24, 1902, an agreement, which did not become effective, was signed with regard to the "construction and management of the Kirin-Changchun railway by the Chinese Eastern Railway Company, with the express object of encouraging the trade of the city of Kirin."

According to this agreement it was intended to have a Supervising Commission appointed, the General Director of which was to have been the Tartar-General of Kirin, "for the supervision of the construction of this railway in a thorough and honest manner." Article 7 provided that at the expiration of 36 years the Chinese Government should have the right to repurchase the railway, and Article 13 provided that on the day of the approval of the agreement at Peking the Chinese Eastern Railway Company should deliver to the Tartar-General of Kirin 350,000 roubles.

At the Sino-Japanese Conference held at Peking on Tuesday, March 23, China agreed to hand the control and administration of the Kirin-Changchun railway over to Japan.

THE LEASED TERRITORY OF LIAOTUNG

Now that China has definitely agreed to extend the lease of the portion of the Liaotung or Kwangtung Peninsula which was taken over by Japan from Russia after the war of 1904-5, it is interesting to recall the historical associations of Japan with this part of China's dominions. In the war which broke out between China and Japan in July, 1894, principally, so Japan averred, to secure Korea's independence, the Japanese forces obtained success on land and sea. The Chinese fortress at Port Arthur was taken, and the Japanese fought their way as far north as Liaoyang. It speedily became apparent that China was no match for Japan and she therefore made overtures for peace. Japan was in such a favourable position that she was able to impose extremely harsh conditions. She compelled the recognition by China of the independence of Korea, the payment of a war indemnity of Tls. 200,000,000, the opening of four additional ports to trade, extended navigation rights for Japanese vessels in Chinese inland waters, and the cession of the southern portion of Fengtien, the island of Formosa and the Pescadores group of islands. The article of the Treaty of Peace signed at Shimonoseki on April 17, 1895, relating to the cession in territory may be quoted in full:

China cedes to Japan in perpetuity and full sovereignty the following territories, together with all fortifications, arsenals, and public property thereon:—

(a). The southern portion of the Province of Fengtien within the following boundaries:—

The line of demarcation begins at the mouth of the River Yalu, and ascends that stream to the mouth of the River Anping; from thence the line runs to Fenghuang; from thence to Haicheng; from thence to Yingkow, forming a line which describes the southern portion of the territory. The places above named are included in the ceded territory. When the line reaches the River Liao at Yingkow it follows the course of that stream to its mouth, where it terminates. The mid-channel of the River Liao shall be taken as the line of demarcation. This cession also includes all islands appertaining or belonging to the Province of Fengtien situated in the eastern portion of the Bay of Liaotung, and in the northern part of the Yellow Sea.

(b). The Island of Formosa, together with all islands appertaining or belonging to the said Island of Formosa.

(c). The Pescadores Group, that is to say all islands lying between the 119th and 120th degrees of longitude east of Green-wich and the 23rd and 24th degrees of north latitude.

Manchuria that Japan secured, but an unqualified cession. Had there been no intervention by other Powers the southern portion of the Province of Fengtien would be now portion of the Japanese Empire. But Japan had not to deal with China alone. For many years the European Powers had been in a state of anxious indecision in regard to the military capacity of China. In the

light of present day knowledge it seems almost ludicrous that so profound was the ignorance in Europe of the internal condition of China that there was a very real dread of provoking her to military action. When Japan had demonstrated that under the rule of the dying Manchu dynasty China had been allowed to sink into a condition of pathetic helplessness and lack of national unity Europe concluded that the Empire was about to fall asunder. Japan, it was decided, should not be allowed to reap the full fruits of her victory. It must be remembered that Japan at that time was far from being a world Power. In fact her steady and methodical assimilation of Western civilization and the development of her military and naval forces on modern lines had attracted but little attention. Her successful emergence from the conflict with China did not inspire most of the Western Powers with an appreciation of the growing strength of Japan so much as a recognition of the weakness of China. Russia in view of her own aspirations for a warm water port, was not willing that southern Manchuria should pass into the possession of a nation that was at least stronger than China. It was represented to Japan that it was considered inimical to the peace of the Far East that any portion of the mainland of China should be ceded to another Power, and Japan, under duress, by a convention signed on November 8, 1895, retroceded the southern portion of the Province of Fengtien, accepting Tls-30,000,000 as compensation.

As a matter of record it will be as well to quote the remonstrance that was addressed by Russia to Japan on this occasion.

The Government of his Majesty the Emperor of all the Russias, in examining the conditions of peace which Japan has imposed on China, finds that the possession of the peninsula of Liaotung, claimed by Japan, would be a constant menace to the capital of China, would at the same time render illusory the independence of Korea, and would henceforth be a perpetual obstacle to the permanent peace of the Far East. Consequently, the Government of his Majesty the Emperor would give a new proof of their sincere friendship for the Government of his Majesty the Emperor of Japan by advising them to renounce the definitive possession of the peninsula of Liaotung.

When, in 1904, Japan went to war with Russia she repeated her triumphs of ten years earlier, but on an immeasurably greater scale. Port Arthur was again taken and the Russian armies were forced north of Tiehling. By the Treaty of Portsmouth Japan became possessed of Russia's rights in Southern Manchuria. Article V. of the Treaty is as follows:—

The Imperial Russian Government transfer and assign to the Imperial Government of Japan, with the consent of the Government of China, the lease of Port Arthur, Talien, and adjacent territory and territorial waters, and all rights, and privileges, and conces-



Administration Building at Harbin.



Chinese Eastern Railway Shops at Harbin.



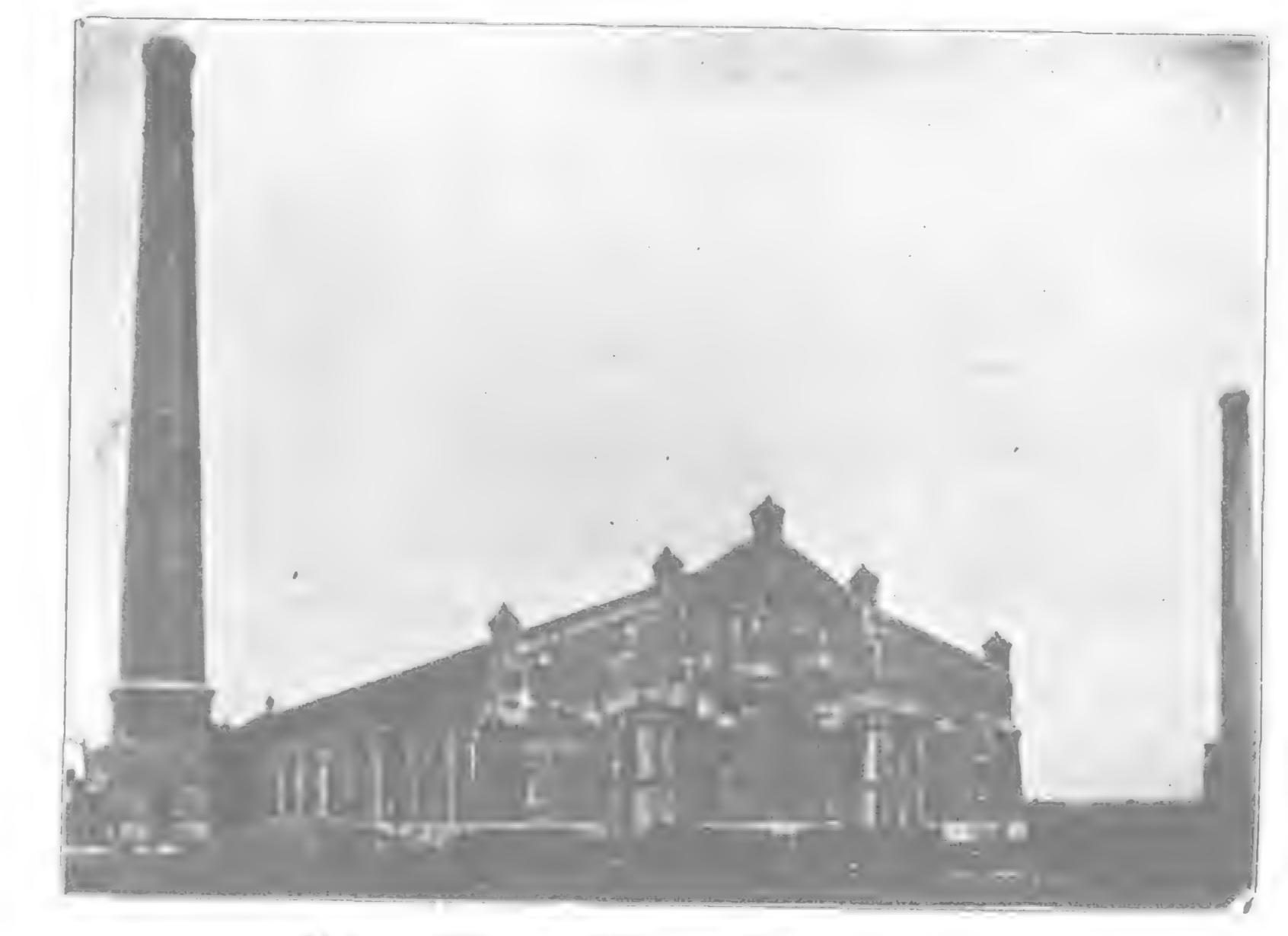
l'assenger Carshops at Harbin.



Street Scenes in Harbin.



Harbin's Main Street.



Machine Shops of Chinese Fastern Railway.

sions connected with or forming part of such lease, and they also transfer and assign to the Imperial Government of Japan all public works and properties in the territory affected by the above mentioned lease.

The two High Contracting Parties mutually engage to obtain the consent of the Chinese Government mentioned in the foregoing stipulation.

The Imperial Government of Japan on their part undertake that the proprietary rights of Russian subjects in the territory above referred to shall be perfectly respected.

It was to secure continued enjoyment of the rights which she gained by the Treaty of Portsmouth that Japan prevailed upon China to extend her tenure of occupancy of the territory in question. That China would consent to the extension of the lease of Port Arthur and Dalny was generally anticipated. The Japanese have expended vast sums of money in the improvement of Dalny, and those who have visited the port of late have been impressed by the wonderful progress that has been made in the iast ten years. In view of the money spent and the magnitude of the interests created it was not to be expected that Japan would willingly consent to surrender the fruits of her enterprise until she had enjoyed them for a longer period than was provided for in the original Convention between China and Russia. Moreover, it is certain that Russia, if she had retained the Leased Territory, would have sought an extension of the lease. Article III of the Convention made provision for this extension. While it may be asserted with confidence that all the Treaty Powers look with distrust and suspicion upon the action of Japan in taking advantage of the European complications to gain a paramount position in China, it may also be said it is doubtful if one of them has any objection to Japan continuing in enjoyment of the benefits accruing from the conditions she has herself created in the Leased Territory.

The circumstances under which Japan gained, lost and regained the rights and privileges she now possesses in South Manchuria have already been related. From a Japanese point of view, no doubt, China has little ground for complaint at the occupation upon lease by Japan of an area considerably smaller than that secured by Japan by the Treaty of Shimonoseki. The territory, the lease of which has now been extended, is defined in the additional agreement between China and Russia signed at St. Petersburg on May 7, 1898. The two Agreements upon which Japan's rights were based were never made public by Russia, but what are believed to be authentic versions have appeared in British Parliamentary Blue Books. We reproduce them here.

CONVENTION BETWEEN RUSSIA AND CHINA FOR LEASE TO RUSSIA OF PORT ARTHUR, TALIENWAN, AND THE ADJACENT WATERS

(Signed at Peking, March 27, 1898)

On the 6th day of the 3rd moon of the 24th year of Kuang Ilsu (27th March, 1898), His Majesty the Emperor of China especially deputed the Grand Secretary Li, and the Vice-President of the Board of Revenue Chang, as Plenipotentiaries to settle the matters connected with the lease of Port Arthur and Talienwan, with Russian Charge d'Affaires Pavloff.

The Convention drawn up was as follows:-

Article I. In order for the protection of the Russian fleet, and (to enable it) to have a secure base on the north coast of China, His Majesty the Emperor of China agrees to lease to Russia Port Arthur, Talienwan, and the adjacent waters. But this lease is to be without prejudice to China's authority in that territory.

Article II. The boundary of the territory leased in pursuance of the foregoing extends from Talienwan northward in accordance with the requirements (of the situation) on land, and of the protection of the territory, and permission shall be given for its being placed at whatever distance may be necessary.

The exact boundary and the other details of this Convention, shall be jointly arranged at St. Petersburg with Hsu Ta-jen, after the signature of this Convention, with all possible expedition, and a separate special Article drawn up. After the boundary has been decided, all the territory included in it, and the adjacent waters shall be entirely handed over to Russia to use under lease.

Article III. The term of lease is fixed as twenty-live years from the date of signature. On expiration an extension of the term may be arranged between the two countries.

Article IV. Within the term fixed, in the territory leased to Russia, and in the adjacent waters, all movements of forces, whether naval or military, and (the appointment of) high officials to govern the districts, shall be entirely left to Russian officers,

one being made responsible, but he is not to have the title of Governor-General or Governor.

No Chinese troops of any kind whatever are to be allowed to be stationed within this boundary. Chinese within the boundary may leave or remain at their pleasure, and are not to be driven away.

Should any criminal cases occur, the criminal is to be handed over to the nearest Chinese official to be punished according to law, in accordance with the arrangement laid down by the VIII. Article of the Russian-Chinese Treaty of the 10th year of Hsien Feng (1860).

Article V. To the north of the territory leased there shall be left a piece of territory, the extent of which is to be arranged by Hsu Ta-ien and the Russian Foreign Office. This piece is to be entirely left to Chinese officials, but no Chinese troops are to enter it, except after the arrangement with Russian officials.

Article VI. The Governments of the two countries agree that, as Port Arthur is solely a naval port, only Russian and Chinese vessels are to be allowed to use it, and it is to be considered a closed port as far as the war and merchant-vessels of the other Powers are concerned. As to Talienwan, with the exception of a part within the port which, like Port Arthur, is to be reserved for the use of Russian and Chinese men-of-war, the remainder is to be a trading port, where the merchant vessels of all countries can freely come and go.

Article VII. Russia definitely recognizes the territory leased but Port Arthur and Talienwan are of special importance. (As to) provision of funds, she will herself erect what buildings are required for the naval and military forces, for the erection of batteries, or barracks for the garrisons, and generally provide all the funds required.

Article VIII. The Chinese Government agree that the principle of the permission given in the 22nd year of Kuang Hsu (1806) to the Manchuria Railway Company for the construction of a railway shall now, from the date of signature, be extended to the construction of a branch line from a certain station on the aforesaid main line to Talienwan, or, if necessity requires, the same principle shall be extended to the construction of a branch line to a convenient point on the sea-coast in the Liaotung Peninsula, between Yingtzu (Newchwang) and the Yalu River.

The provisions of the Agreement of the 8th September, 1896, between the Chinese Government and the Russo-Chinese Bank shall be strictly observed with regard to the branch line above mentioned. The direction of the line and the places it is to pass shall be arranged by Hsu Ta-jen and the Manchurian Railway Company. But this railway concession is never to be used as a pretext for encroachment on Chinese territory, nor to be allowed to interfere with Chinese authority or interests.

Article IX. This convention shall come into force from the date of exchange (sic) by the Plenipotentiaries of both countries. After Imperial ratification exchange shall take place at St. Petersburg.

ADDITIONAL AGREEMENT DEFINING BOUNDARIES OF LEASED AND NEUTRALIZED TERRITORY IN LIAO-TUNG PENINSULA

(Signed at St. Petersburg, 7th May, 1898.)

The Governments of Russia and China being desirous of adding some stipulations to the Treaty concluded at Peking on the 15th March, 1898 (Russian Calendar) the Plenipotentiaries of both Governments have agreed upon the following:—

Article I. In accordance with the IInd Article of the original Treaty the northern territory leased and yielded to Russia—Port Arthur, Talienwan, and the Liao-tung Peninsula—shall commence from the north side of A-tang Ray on the west coast of Liaotung and shall pass through the ridge of A-tang Mountain (the mountain ridge being included in the leased ground) to the east coast of Liaotung near the north side of Pitzuwo Bay. Russia shall be allowed the use of all the waters adjacent to the leased territory and all the islands around it. Both countries shall appoint special officers to survey the ground and determine the limits of the leased territory.

Article II. To the north of the boundary fixed in Article I, there shall, in accordance with Article V of the Peking Treaty, be a neutral ground, the northern boundary of which shall commence on the west coast of Liaotung at the mouth of Kaichou River, shall pass north of Yuyenchang to the Tayang River, and follow the left bank of that river to its mouth, which shall be included in the neutral territory.

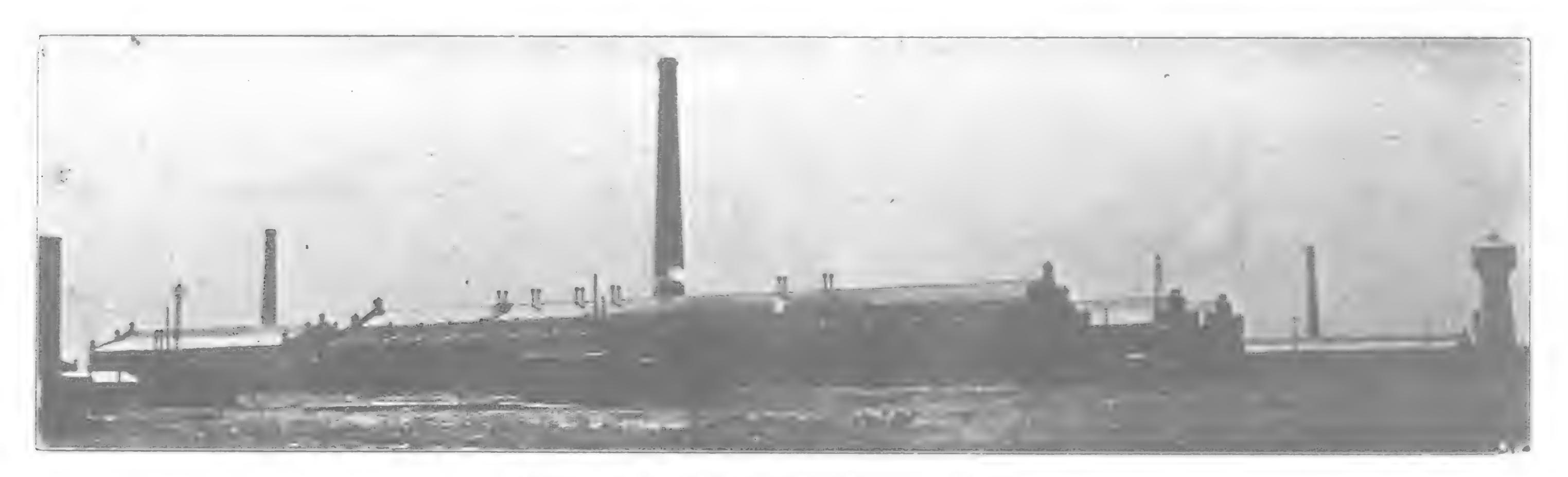
Article III. The Russian Government consents that the terminus of the branch line connecting the Siberian Railway with the Liaotung Peninsula shall be at Port Arthur and Talienwan, and at no other port in the said peninsula. It is further agreed in common that railway privileges in districts traversed by this branch line shall not be given to the subjects of other Powers. As regards the railway which China shall (may) herself build hereafter from Shanhaikuan in extension to a point as near as (lit. nearest to) possible to this branch line, Russia agrees that she has nothing to do with it.



Main Administration Building of Chinese Eastern Railway at Harbin.



Main Street of Harbin, leading to Railway Station.



Chinese Lastern Railway Car Shops at Harbin.



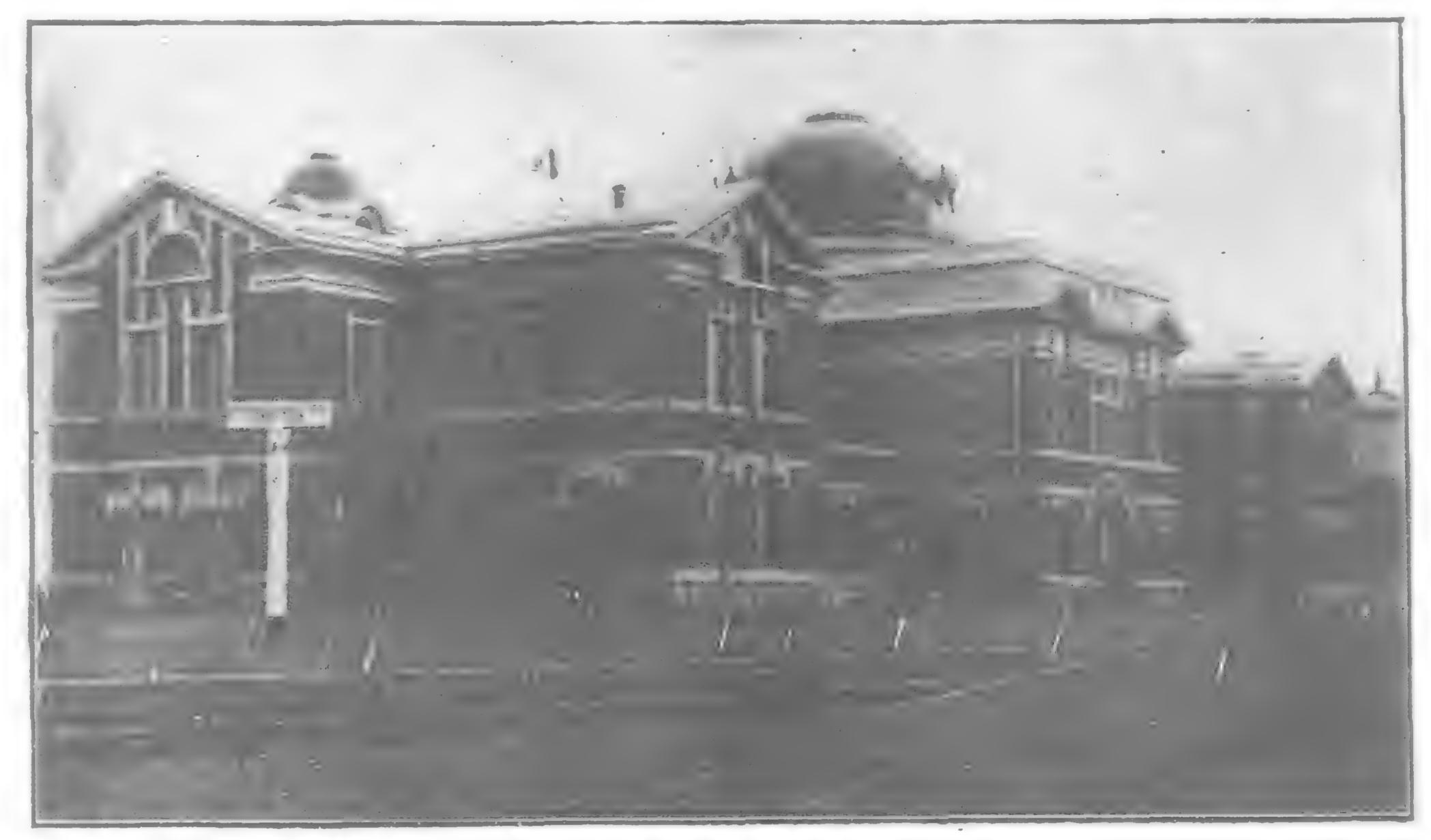
Typical Station on Chinese Eastern Railway.

Article IV. The Russian Government assents to the request of the Chinese Government that the Administration and police of the City of Kinchow shall be Chinese. Chinese troops shall be withdrawn from Kinchow and replaced by Russian troops. The inhabitants of the city have the power to use the roads from Kinchow to the north boundary of the leased territory, and the waters usually required near the city but they have no power to use the sea-coast round about.

Article V. The Chinese Government agrees (lit. agrees to recognize) 1. That without Russia's consent no concession will be made in the neutral ground for the use of subjects of other Powers. 2. That the ports on the seacoast east and west of neutral ground shall be not opened to the trade of other Powers. 3. And that without Russia's consent no road and mining concessions, industrial and mercantile privileges shall be granted in the neutral territory.

The extension of the lease of the portion of the Liaotung Peninsula under Japanese jurisdiction is of no great importance from a strategic point of view. Now that Japan has full possession of Korea the value of Port Arthur as a naval base has diminished, if it has not entirely disappeared. But commercially the retention by Japan of Dalny, the most favourably situated and in many ways the best of ports serving the Three Eastern Provinces, is of the first importance. Unless and until the port of Newchwang be improved, the bulk of the trade of South Manchuria must pass through Dalny. Apart from its natural advantages the Japanese have provided every possible facility for the handling and storing of produce and cargoes at Dalny. Even those least enamoured of Japanese methods are fain to confess that they have left nothing undone at Dalny to attract trade. The safety of the harbourage has been secured regardless of expense, warehousing accommodation on the most generous scale has been provided and the South Manchuria Railway Company has done everything that would facilitate the handling of goods from oversea or produce from the interior.

In articles published in the FAR EASTERN REVIEW last year it was pointed out that the soul of Dalny is the South Manchuria Railway. This was not an over-statement of fact. The visitor to the port is everywhere confronted with tangible evidence of the comprehensive character of the Company's activities. Most of the public services, if not all, are operated by the Company. It built the huge Yamato Hotel, which cost a million yen; it established the summer hotel at Hoshigaura, or Star Beach; it operates the water and electricity supply, runs the tramways and in fact supervises nearly all the municipal activities. In view of the intimate association between the port and the railway, the extension of lease if granted to the one had necessarily to be granted to the other.



New Station of South Manchuria Railway at Mukden.



Entrance to Yamato Hotel occupying Upper Floors of Station Building.



South Manchuria Railway Hospital at Mukden (side elevation).



Front Elevation of Hospital.

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
THE SINO-JAPANESE NEGOTIATIONS

Japanese diplomacy, it may be said, is on trial. It has sought to establish new rules for international intercourse When Mr. Hioki, the Japanese Minister at Peking, presented on behalf of his Government twenty-one demands, not to the Chinese Minister for Foreign Affairs, but to the President of the Republic of China, he violated a well-established law governing diplomatic intercourse. No Ambassador or Minister has the right to seek to carry on negotiations with the head of the State to which he is accredited. Were it permissible for this to be done there would be no reason for the existence of Ministries of Foreign Affairs. When it became known that the Japanese Minister, acting no doubt upon instructions from Tokyo, had committed the grave breach of etiquette involved in ignoring the Chinese Ministry of Foreign Affairs, the motive began to be sought for. The search has hitherto been unsuccessful. Several theories have been advanced, but no satisfactory explanation has yet been found. The Japanese could clear up the mystery were they so disposed, but they prefer to emulate the silence of the Sphinx and let it be assumed that they consider themselves superior to rules and regulations by which other nations are content to be bound.

Apart from the negotiations still being carried on in Peking the most significant development has been the intense interest. largely dashed with apprehension, that has been manifested in Great Britain in regard to Japan's real objects. It will be remembered that when a summary of Japan's demands was published in Great Britain and America the Japanese Government, aided materially by its subsidized Press Agency, sought to discredit all reports emanating from Peking. The allegation was made that these reports were gross exaggerations, and that instead of twenty-one demands only eleven had in reality been submitted. This attempt to mislead the Treaty Powers was foredoomed to failure, and it was a matter of surprise to many that the Japanese Government should adopt a course that would inevitably result in its mala fides becoming manifest. That this is what has actually happened is evident from the comments made by English and American newspapers and the searching questions that have been asked in the British House of Commons. It has been pertinently asked, and no reply has yet been ventured, why, if Japan's demands are so innocuous she does not consent to their publication. As Japan has not dared to accept the challenge to place her case frankly before the world the conclusion has naturally been drawn that she is seeking to alter the status quo in China in a manner that would evoke general condemnation. In Great Britain the conviction is evidently rapidly gaining ground that Japan is seeking to gain a paramount position in China at the expense of the other Powers interested, her ally in particular.

In the last issue of the FAR EASTERN REVIEW the record of the negotiations in Peking between the Japanese Minister and the Chinese Minister of Foreign Affairs was brought up to February 13. It may be as well to remind readers that Japan insisted that in the first instance China should accept all the demands in principle. To this China offered the most strenuous opposition. The Chinese Government recognised that the acceptance even in principle of some of the demands would involve the surrender of China's sovereignty and the establishment in effect of a Japanese protectorate. In view of the newly awakened, but steadily growing sense of nationhood among the Chinese now that they have freed themselves from the shackles of an alien dynasty, consent by the Chinese Government to virtual control by a Power that has never manifested anything but unfriendliness to China, would be the signal for the outbreak of rebellion. This is perfectly well understood by the Japanese Government, and it seems just to assume, therefore, that Japan is deliberately seeking to force the Chinese Government into a position in which it will have to make its choice between a foreign war or civil convulsion. Either would mean ruin to China. The Chinese Government is apparently inspired by the belief that the nations of Europe and America that have vested interests in China will bring pressure to bear upon Japan to prevent the destruction of the new edifice of Government that is being slowly but surely raised amid the ruins of the past régime. In that hope and belief China has refused to agree even in principle to the demands granting Japan

REVISED RAILWAY MAP OF CHINA SHOWING JAPAN'S DEMANDS.



paramouncy, while at the same time she has exhibited perfect willingness to discuss those which are, comparatively though not positively speaking, reasonable.

After the postponement of the conference that was to have been held on February 12, there were indications of some indecision on the part of the Japanese. They had apparently placed too much reliance upon their power to force China into a frightened acquiescence to their demands before others interested had learnt their character. On Thursday, February 18, the Chinese Government notified the Japanese Minister that they were willing to resume negotiations in regard to the twelve demands to which reference had already been made. Apparently, however, at this stage the Japanese had not resolved upon the course they would pursue, as Mr. Hioki intimated that he would have to wait instructions from Tokyo. These were not received until February 20 when Mr. Hioki was instructed to inform the Chinese Government that Japan insisted upon the whole of the twenty-one demands being made the basis of negotiation. It was arranged that a conference would be held on the following Monday.

This conference, held on Monday, February 22, did something to clarify the situation. It was attended by the Japanese Minister and the First Secretary of the Japanese Legation on the one hand and the Chinese Minister of Foreign Affairs and the Vice-Minister of Foreign Affairs on the other. The Japanese once again endeavoured to persuade the Chinese to agree in principle to the whole of the twenty-one demands, but without success. Failing in this the Japanese suggested that discussion on the acceptable demands should proceed and that those that were objected to should be postponed for later consideration. To this suggestion the Chinese demurred and a discussion ensued on the first group of demands relating to Shantung. The Chinese presented counter proposals that Japan should fulfill her promise to hand Kiaochou back to China, and that the status quo in Shantung should be restored by the withdrawal of Japanese troops and railway guards and the removal of the light railway and telegraph lines erected by the Japanese. These counter proposals were rejected by the Japanese and the conference was postponed until February 25. The conference on February 22 lasted for four hours and a half.

The Shantung demands were again discussed at the conference held on Thursday, February 25. The Chinese representatives announced that their Government had instructed them to inform the Japanese delegates that the Chinese Government would agree to open "certain important places" in Shantung as Treaty Ports, that being in accordance with the policy of the Government as was shown by the voluntary opening of Hulutao, Lungkow, and five other ports in 1914. In regard to the other demands in relation to Shantung it was suggested that discussion should stand over until the conclusion of the European War. The demands in connection with South Manchuria (Eastern Inner Mongolia being refused consideration by the Chinese) were next considered, the discussion centering upon the preamble in which Japan wished China to acknowledge Japan's "special position" in those regions. The Chinese expressed themselves unwilling to agree to this as it would amount to an acknowledgment of Japan's dominance and would be a negation of the principle of equal opportunity for all. This point was still under discussion when the conference adjourned.

On February 28, the discussion in reference to South Manchuria and Eastern Inner Mongolia was resumed. The Chinese maintained that Japan was asking for considerably more than she was entitled to claim by virtue of the rights she took over from Russia. In particular the demand for the conversion of Eastern Inner Mongolia into a Japanese sphere of influence was not justified by reference to any of the agreements or understandings entered into by China with Russia or Japan. The Chinese representatives pointed out that to accede to Japan's wishes would conflict with the Treaty rights of other Powers, masmuch as they involved a negation of the principle of equal opportunity. If it were not sought to interfere with the principle of equal opportunity—and, perhaps, even if it were—by the Most Favoured Nation Clause of the Treaties the other Powers would automatically acquire the rights that Japan sought exclusively for herself. The regions in question, were Japan's

demands acceded to, would be thrown open to residence and exploitation by all nations having treaty relations with China. In a word the whole of South Manchuria and Inner Eastern Mongolia would be transformed into an "open port." The Japanese representatives denied the logic of these conclusions and intimated that they expected China to arrive at a speedy decision in regard to these particular demands.

The question of the extension of the term of the lease of Port Arthur and Dalny to 99 years came up for consideration at the conference on March 8. This was one of the least objectionable of Japan's demands for reasons which are set out in detail elsewhere. The original lease would, in the normal course, terminate in a few years, but it would be a practical impossibility for China to refund the money expended by Japan for improvements, and consequently no serious objection was raised to its extension.

At the next conference, held on March 7, China consented to extend the term of the lease of the South Manchuria Railway to 99 years. That this would be done was inevitable, and the only question that presented possibilities of disagreement was in relation to the repurchase of the railway by China. Discussion on this point was postponed but the repurchase clause was ultimately extended to the term of the lease.

When Japan compelled China to permit the transformation of the narrow gauge military line laid by the Japanese between Antung and Mukden during the Russo-Japanese War to the standard gauge, Japan was given a lease of the line until 1923. At the conference held on March 9 the Japanese representatives pressed the Chinese to extend the term of the lease of this line to 99 years as in the case of the South Manchuria Railway. In the circumstances there was no good ground for China refusing to agree to this demand, which was a natural corollary of those relating to the Leased Territory of Liaotung and the South Manchuria Railway. The extension of the term of the lease was therefore granted.

China had thus made very considerable concessions to Japan and had exhibited a spirit of reasonableness that won the commendation of all whose views were not perverted by prejudice. Japan had secured the continued enjoyment of the rights and privileges that she had gained as a result of her victory over Russia and was confirmed in her special economic condition in South Manchuria. But this was not nearly enough for Japan. China was compelled to agree that if any third Power offered to provide money for the construction of railways in South Manchuria or Inner Eastern Mongolia the consent of Japan must first be obtained. This restriction also applied to any foreign loan on the security of the local taxes of South Manchuria and Inner Eastern Mongolia. While the Chinese were averse to acceding to these demands, in view of the grave danger involved of complications with other Powers, they eventually gave way. The demand for exclusive mining rights was also discussed. The Chinese proposed that Japan should have the right for a term of one year to prospect the mineral areas of South Manchuria and should have the right to open fifty per cent of the mines so prospected. This was agreed to but the question was again opened by the Japanese.

Much to the surprise of the Chinese representatives, at the conference held on March 13, Mr. Hioki, the Japanese Minister, intimated that his Government was not satisfied with the arrangement about loans for railways or other purposes in South Manchuria and Inner Eastern Mongolia. At the previous conference it had been definitely decided that Japan was first to be consulted if a loan were to be sought for railway construction in South Manchuria or Inner Eastern Mongolia from a third Power, or if China proposed to raise a loan from any third Power on the security of the local taxes of these regions. Now the Japanese demanded that Japan alone should have the right to advance the money in the circumstances stated. Not unnaturally the Chinese objected to this. If, after an agreement were arrived at, the Japanese were calmly to repudiate it at a subsequent conference it was obvious that the Chinese would never know where they stood. The reopening of questions upon which a supposedly final determination had been arrived at could only delay the negotiations. The result of this delay would inevitably be that

China would be accused of "procrastination," whereas the blame should obviously rest on the Japanese. This aspect of the matter was discussed for several hours without a satisfactory conclusion being reached.

As an alternative to the demand that Japanese subjects should have the right of residence in the interior of South Manchuria and Inner Eastern Mongolia, the Chinese had suggested that they should open a large number of Treaty ports in order to facilitate trade and commerce. The Chinese recognised the great danger that would be involved in having numbers of Japanese pushing into every part of the interior who would not be amenable to Chinese law. If increased tradal facilities were all that Japan desired the opening of a number of treaty ports would meet their wishes without the danger being incurred of future complications. At the conference held on March 16 Mr. Hioki produced certain amendments to the demands in regard to South Manchuria and Inner Eastern Mongola, which in some cases rendered them still harsher. For example in regard to the right of residence in the interior of these regions Japan now demanded that China should open twenty-seven treaty ports, which were specified, and in addition should grant the Japanese the right to reside and travel in the interior as originally demanded. Another amendment proposed by the Japanese was that all civil and criminal cases in which Japanese were concerned in these regions should be adjudicated upon by Japanese courts, and Japanese should have the right to lease land either temporarily or perpetually for purposes of manufacture or trade. In regard to farming it was demanded that in these regions Japanese subjects should have the right, both within and without the treaty ports, to carry on farming either by themselves or in co-operation with Chinese and should be allowed to lease land for these purposes. Another amendment demanded that thirteen mining areas should be delimited and the mines therein reserved for working by the Japanese. Mr. Hioki intimated that his Government insisted upon the acceptance of these amendments. He also announced that Japan agreed that if China wished a loan for the construction of railways in these regions, or desired to raise a loan for any purpose for which the security was to be the local taxes of these regions, Japan was first to be consulted. It will be remembered that after agreeing to this at one conference the Japanese demanded that they should have the exclusive right to provide loans in the circumstances defined. They have now receded to their original posit on. On their part the Chinese representatives agreed that if China decided to employ political, in litary, financial or police advisers or instructors in South Manchura or Inner Eastern Mongolia, Japanese should have the preference.

Owing to Mr. Hioki meeting with an accident the conferences were not resum d until March 20 when Mr. Obata, the Frst Secretary of the Japanese Legation, acted for Mr. Hioki. The discussion of the demands in reference to South Manchuria and Inner Eastern Mong la was resumed. It is to be remembered that the Chinese have throughout deprecated the association of South Manchur a with Inner Eastern Mongolia. While it is adm tted that Japan as successor to Russia acquired certain rights in South Manchuria, it is denied that she has any defin d poston in regard to Inner Eastern Mongolia. Mr. Obata int mated that Jopan rejected the proposal to open 17 "ports" in South Manchur a and urged the Ch nese to grant J panese subjects the right to reside and trade in these regions. The C'nnese pointed out that there was a certain amount of amb gaity in Japan's attitude as the seventeen open parts (as well as ten in Eastern Mongol a which China would not consider) referred to were named by Mr. Hioki and not by the Ch nese. Japan apparently wished to reject a proposal she had put forward herself.

When the question of Japanese subjects engaging in farming and acquiring land for that purpose came up, the Chinese representatives intimated that they were prepared to concede this demand if the Japanese were willing to forgo their extra-territorial rights and place themselves under Chinese jurisdiction. Mr Obata pointed out that no finality could be reached as long as the Chinese tried to exercise jurisdiction over Japanese in South Manchuria.

A will agness to meet the Japanese demands re inference to mining was shown. The Chinese said thatw hile they were

prepared to agree to the delimitation of some of the thirteen mining areas named by Japan, they pointed out that certain others had already been assigned both to Chinese and to foreigners.

Discussion followed on the demand that China should hand over to Japan the control and administration of the Kirin-Changchun Rallway for 99 years. The Chinese representatives said that they were willing to agree that the capital of the line should be entirely Japanese, the railway, however, remaining a Chinese Government line. In reply to this overture Mr. Obata said that if Japan were inclined to agree there must be a fundamental alteration of the agreement so that in a new agreement Japan should be given terms as favourable as any of those granted to any nation in connection with railways in any other part of China.

The next conference was fixed for March 23 and it was arranged that it should be held at the Japanese Legation.

Before concluding the record of the negotiations up to the time of writing it is well to point out that there have been move ments of Japanese military forces that have excited apprehension in China and suspicion in other quarters. Some 30.000 troops, it is stated, have been despatched to China. The official Japanese explanation is that this merely represents the relief of garrisons, but the explanation is regarded with considerable doubt.

CHINA AND HER FRIENDS.

A study of the Treaties, Conventions, Agreements and other instruments obtaining between China and other nations will disclose the remarkable fact that she is regarded with the warmest sentiments of friendship by all the Treaty Powers. Thus Japan, "desirous of strengthening the friendly relations between China and Japan," amicably suggests that China should become a vassal state, hand over one of her railways without compensation of any kind, and slam the Door of Equal Opportunity in the face of all other Powers! This demonstration of pure and disinterested friendship is supported by military preparations.

It is time that China realized the fatuity of pretending friendship with nations that are obviously intent upon her despoilment in the first instance and destruction in the last, and began instead to discriminate. We do not intend to consider the subject in all its bearings in this article, but it may be of service to point out by what policy China's interests can best be served. The hypothesis that China can stand alone may be dismissed at once. She has neither the financial nor the military strength to resist oppression. Consequently it is imperative that she should gain the goodwill of those who possess what she lacks and whose past record inspires the hope that they will not set an impossible price upon their friendship. By a process of elm nation, which need not be described in detail, the number of nations that might be expected to give China fair play were she to appeal to their sense of right and justice, is reduced to two-the United States of America and Great Britain. Oi these two countries it may confidently be said that they harbour no designs upon China's territorial integrity nor upon her pol tical independence. The assumption is justified that, broadly speaking, the present policy of America and Great Britain in regard to Ch.na is to preserve the terr.torial integrity of the Republic and to ma nta n the principle of equal opportunity for industry and commerce of all countries. Other nations have ostensib'y comm tted themselves to a similar policy, but in regard to some their actions have belied their words, while others have but an academic interest in the future of the Republic and may be expected to regard with indifference acts of aggression calculated to render nugatory the diplomatic agreements to which they have set their hands. To America and Great Britain alone can China lock with any hope of receiving succour in the hour of trial that is now upon her.

What form should such an appeal take? Obviously China has no prospect of forming an all ance with these countries. An alliance presupposes the rendering of reciprocal military services. But it should be possible for China to offer to America and

Great Britain special commercial advantages that would induce them to change passive goodwill into active triendship. Wellintentioned though these nations be towards China, it would be include ng a vam hope to expect them to mieriere actively on China's behalf unless by so doing they secured some auvairage for themselves as well as for Cu.na. Abstract amusm has as little existence in national as in ind. vidual alia.rs in individual transactions both the honest man and the unscrupulous man are seeking the same goal, but by different roads. St.il, ouv.ously it is better to deal with the honest man, though he may keep his own advantage steadily in view. China is being asked by Power that has gamed for itself a reputation for rapacity and duplicity, to place herself under its tutelage. It the position be so desperate as to leave China only a choice between evils it would be better for her to throw nerself unreservedry upon the protection of America and Great Britain. It China were to do this she would certainly be foregoing to some extent her rights as a sovereign Power. But surly it would be better to be under the protection of two nations whose good-taith is beyond suspicion and who might be expected to do their best to assist China to become self-reliant than under the protection of a Power that has never evinced anything but ill-will and hostility towards the Chinese nation. Some of the Japanese newspapers have occasionally lapsed into veracity and honesty and have emphasized with regret the fact that Japan is the one nation that has never man tested the faintest symptoin of an altruistic desire for the progress of the Chinese people and the betterment of their condition. Yet this is the nation that asks the Chinese Government to estrange those whose triendship is not entirely self-seeking and to commit the future of the Republic to hands that are avowedly hostile! The people of China are just'y proud of their ancient civilization, and it would be an almost intolerable shock to their pride to have to place themselves under alien wardship. Sympathy must be felt with the sentiment, but temporary shock to pride is better than permanent abasement. Beneath the protection of America and Great Britain, China would have a fair chance of carrying out the reforms upon which she has entered and of htting herself for the position she should eventually fill in the sisterhood of nations. It should be possible, given full and implicit trust on both sides, to so arrange matters that China would receive the necessary protection from the two branches of the Anglo-Saxon people, without really jeopardizing her position as an independent state.

In the past, although the policy of Great Britain and America in regard to China has been more in accord than that of other countries, there have been minor differences. These have never really been serious and should be easily susceptible of adjustment. Their policy, in its main essentials, is identical. Both countries want to see China retain her territorial integrity and political independence. Both realize that a China weilgoverned and freed from the fear of aggression would afford an immense field for a mutually advantageous trade. Though they do not, as a fixed line of policy, seek for exclusive advantages for themselves they should recognize that it may be necessary temporarily to secure a special position in order to defeat the machinations of those whose ultimate ambition is to transform China into a closed preserve for one particular nation. Co-operation between America and Great Britain in their Far Eastern policy would not only serve to maintain China's independence, but would tend to draw closer the bonds that unite these two great countries.

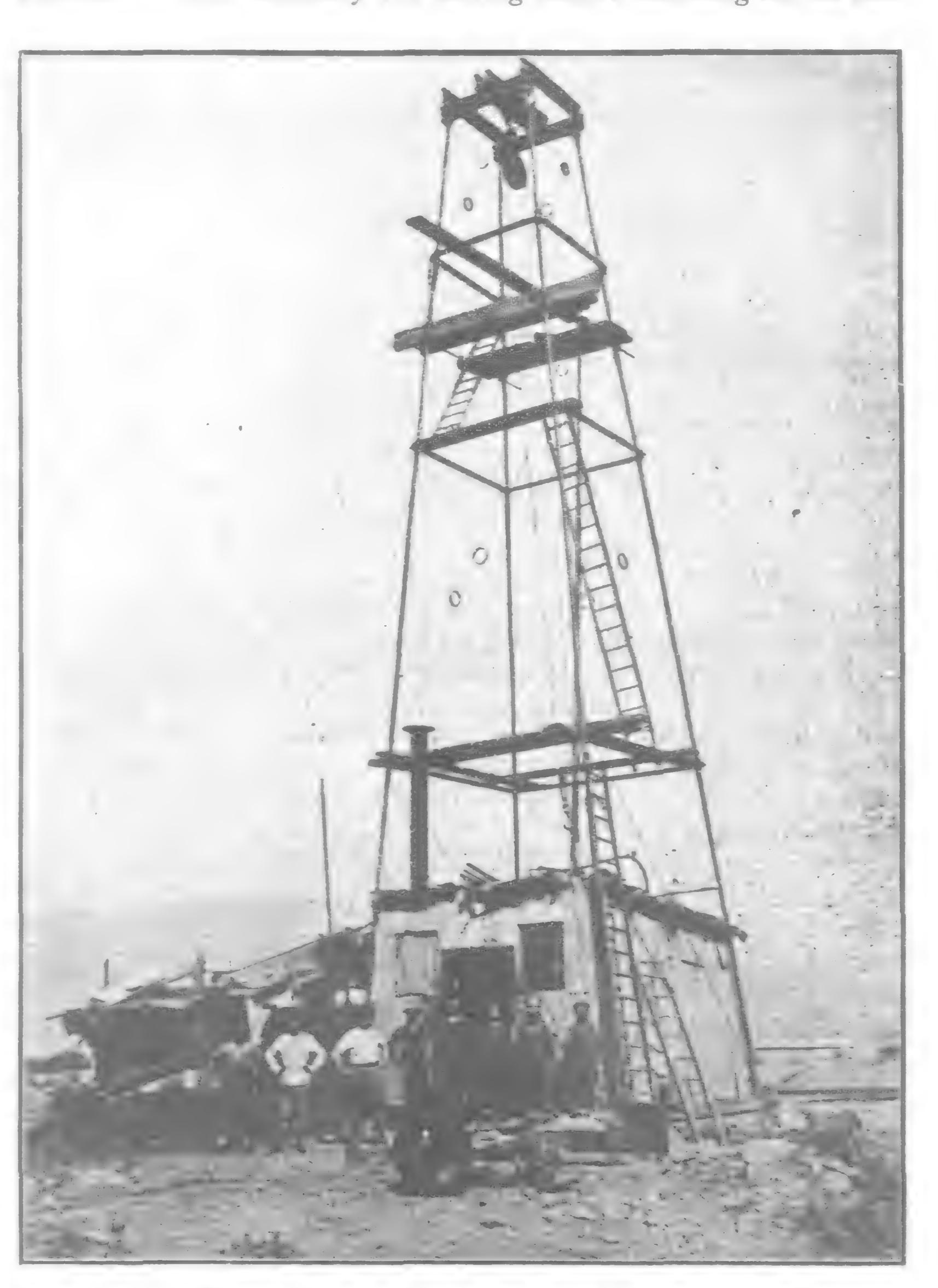
CHINESE CABINET CHANGE

An important Cabinet change has been made in Peking which it is hoped will not affect the financial reorganization which was lately instituted. Mr Chow Tze-chi, who has made some excellent progress as Minister of Finance has been transferred as Minister of Commerce, Agriculture and Industry, and he has been replaced by Mr Chou Hsueh-hsi in the Finance Board. The latter was Finance Minister when the Reorganization Loan of £25.000,000 was signed with the Group Banks. He then held the post between July 26, 1912 and Sept 4, 1913. Mr Chow Tze-

the Minstry in order more effect. vely to develop the industries of the country, a matter to which we will refer in a future edition.

DEVELOPMENT OF CHINA'S MINERAL RESOURCES

It is interesting to note that the Peking Syndicate, Limited, have recently formed a Development and Exploration Department which should give an impetus to many mining enterprises in China whose progress has been seriously impeded through lack of the necessary plant and skilled labour. The Peking Syndicate possess complete Diamond Boring Plants operating under expert supervision and are now undertaking boring under contract. The necessity for boring before deciding on the site



Peking Syndicate Boring Plant at Mentakou.

for shafts need not be emphasized. The failure of efficiently working a coal field in China has in a large number of instances been due to the lack of knowledge on the part of the proprietors as to the exact nature of the field. The necessary data in this connection can only be obtained by putting down bore holes. Operations of this nature have been in progress for some time on the permit granted to the Tung Hsing Sino-Fore gn Coal Mining Co., in the Western Hills at Mentakou, near Peking. This Company contemplates extensive developments and one bore hole which was put down to a depth of over 1,500 feet proved several seams of coal of a workable thickness. This work has been undertaken by the Peking Syndicate on a contract basis, and when completed the available data will be of immense value in working the field.

OF SHANTUNG MES

DEPOSITS GOLD

As far back as 1868, Rev. A. Williamson contributed a very valuable report on the Minerals of Shantung. In referring

to gold he said:-

When I first began to make inquiries regarding the minerals here, I was astonished at the universality of the knowledge of the existence of gold and the apathy regarding it. Every one seemed to know of it. A native literary friend said that "it was found in the sand of almost all the streams in the eastern portion of the province after heavy rain." Another welleducated man acquainted with the district reported the fact in nearly the same words, and the other day a man, a scholar from Hai-yang, said that it was found in the rivulets in his neighbourhood. But while it thus appears to be very widely distributed, there are several places which stand out pre-eminent. The first is Kieudien, 70 li S.E. from Lai-chow, lat. 37 deg. 12 min. N., long. 120 deg. E. and 95 li N.E. of Ping-tu. Marvellous stories relating to the richness of the quartz and the sand are current among the people, which of course have to be taken cum grano salis. I was told that a tea-cup full of the quartz, ground down, would sometimes yield two oz. of gold, and that 100 catties of the sand was worth about 1,000 cash; I was also informed that many years ago a man came from Shen-si with 300 followers, and in two months cleared 50,000 oz. after paying all expenses, and so on. Two or three years ago, a company of respectable men belonging to the neighbourhood made a proposal to the Chi-hien mandarin to work the mine, but he demanded 10,000 taels in hand before he would allow them to commence operations. They offered 3,000 taels, but did not venture a larger sum-more especially as they could not tell how much more might be demanded after they had commenced. The mandarin remained inexorable, and so the project was given up. I mention this to show why so few care to engage in the mining of the precious metals. The jus metallorum lies with the Emperor and Government, and they have no scruples in the matter of squeezing. The mandarins also say that they are afraid of disturbances among the workers of such mines.

Another place famed as a market for gold-dust is Ku-hien, about 18 miles W. by S. from Chefoo. It is procured in the streams which flow from the Lau-sze-shan. I have passed several old gold-washings on the banks of the river which flows past the town.

A third place is Kow-tew near Ning-hai, 60 li S.E. of Chefoo. In my last journey, having passed through a district 100 li to the S. W. of Chu-ching, long. 119 deg. 45 min. E., lat. 36 deg. 1 min. N., apparently full of minerals, and having arrived at the village of Kwun-sae and finished my work, I enquired of the inn-keeper—as my custom was—about the products of the district. He told me of a wonderful hill about 10 li south of where we were, which he affirmed was full of metals. It was called the hill of the "Seven precious things," and yielded gold, silver, copper, lead, tin, iron, and coal. He further said that it had been mined up to the close of the Ming dynasty, but was now forbidden. Deeming his story to be too good to be true, I sent out my assistant to enquire quietly about it, and he returned affirming that the matter was well known, and that two or three persons independently confirmed the inn-keeper's report. Though no one cares to engage in the regular operations of mining for the reasons already stated, yet any one is at perfect liberty to search the streams. Accordingly, every year a good many of the natives engage in this employment. They often find nuggets of varying size, which is a great temptation to persevere, in spite of failure. And yet last year I have been told that the gold-washers made on an average about one dollar per day in the district of Tsi-hya.

In a paper on the mineral Resources of Shantung read before the China Branch of the Royal Asiatic Society, in 1887, have been produced in Eastern Shantung is Galena, Lead ore

Mr. H. M. Becher, As. M. I. C. E., made the following references

to the gold deposits of the Province:

Next in importance to Coal and Iron we may consider the Gold of Shantung, though, as in other parts of the world where this precious metal is found, its remunerative production remains a matter of speculative uncertainty—until established by demonstration. Gold was undoubtedly found, and as surely produced in this country, before the age of enlightenment of many other parts of the world, including that of the red man by his white prospecting brother on the famous Pacific slopes, but no rich finds of "pay-gravel," no "Eureka gulches" or Cherokee flats" have followed the discovery on this side to enrich the Shantung digger and elevate him to the standard of the denizens of Sacramento Valley, though he has had a hundred times the number of years for its development and his own. Even if we allow that his forefathers have exhausted the placers, and left the later generations nothing but the bed rock to work on, surely some stronger argument than the inferior intelligence of John Chinaman must be necessary to account for the wealth of this richer California remaining unnoticed by him till to-day. With all due respect to the opinion of von RICHTHOFEN on the one side, and that of the optimist prophets of the coming golden age of wonders on the other, I venture to maintain a modest estimation of my own of this subject, though hardly venture to predict from my short experience any absolute certainty of the results of pending trials. The source of the Gold, which still constitutes an item of regular production in small stream washings, is undoubtedly traceable to quartz veins in the gneissic country rocks of the well-defined auriferous regions. The question is, how far these original sources are in themselves suitable for exploitation. That rich outcrops of free milling Gold rock are not abundant is evident from the fact that only very few traces of workings on such are to be found amongst a people who are by no means ignorant or slow to profit by the occurrence of the precious metal when it pays them to get it. The other alternative remains that quartz containing too small a percentage for extraction by any but the most skilful treatment may exist in quantities, though it has proved valueless to the natives, who never learnt any but the rudest methods of dealing with it. From actual examination and practical test | am convinced that the greater number of quartz veins are but small and of low grade. The larger veins are often almost barren, whilst the richest streaks are generally far too minute and irregular to be profitably followed through the rock. I am sorry I have no statistics on the actual annual production of Gold from native washings, whilst the out-turn of the only Gold mine and mill established is yet too uncertain a problem for conclusions. Such as they are, the auriferous rocks are widely distributed over the eastern end of the peninsula. Three places are, however, especially reputed as centres, viz., Ning-hai, Chi-hia, and Ping-tu, whilst other small districts collect little parcels of Gold-dust to supply the travelling buyers who make periodical visits in its quest from Chefoo and other markets. It is hoped by the present adventurers to find and work mines in all these districts; but up to the present, Ping-tu only has afforded a lode worth the re-opening of ancient workings, no second lode of sufficient size and richness having been discovered elsewhere. Even in the Ping-tu districts many other promising-looking outcrops, on which systematic explorations were commenced, had to be abandoned as worthless. I have prepared an abstract of 99 assays of auriferous samples from which the average of the Ping-tu mine quartz proves to be from one to two ounces of Gold per ton, whilst that of other quartz veins seldom averages more than half an ounce. A further unfortunate characteristic of these ores is the prevalence of Pyrites and consequent combination of the precious metal, which is thus not all what 18 known as "free" for extraction.

The only other metalliferous ore actually found and said to

containing Silver, the latter (sycee) metal of course forming the attraction, and dignifying its reputed localities with the posthumous fame of Silver mines. Most of the occurrences are too insignificant to map, and it is hardly probable that any will afford material for mining, but in the west larger deposits are reported at Chi-chuan, on which it is proposed to commence extensive smelting operations, although the resources of the mines themselves have not been established. Several samples from Chi-chuan, Kü-cho and other spots showed most of this Galena not to be very rich in Silver, generally from 20 to 30 ounces per ton. Besides these no actual ores of Silver have been found to my knowledge.

Copper ores are still more conspicuous by their absence in anything like abundance. I have seen no Copper lodes, but only a few specimens from the I-shui district.

Quicksilver and Tin, though figuring on FAUVEL's and HOWARD's maps, appear to be only of legendary existence, which is to be regretted, as mines of these ores would be of great value to the Chinese, who use both metals largely.

Jade and precious stones complete the category of Shantung's reputed mineral resources. Of the former I have only seen the mock variety used for common stone ornaments, whilst common, valueless Garnets are the only representatives of the latter, much to the loss in intrinsic value of my collection.

Productions," I have, in conclusion, to mention a few less sensationally attractive minerals, not figuring on the map, but which really do contribute to the resources of the country; and I must also briefly refer again to one and the only class of metalliferous outcrops in which I discovered a fertile and interesting object for mining exploration.

The possible existence of a certain class of valuable metalliferous deposits, as indicated by numerous strong serruginous outcrops, deserves some special attention; such outcrops are found only in the limestone rocks which von RICHTHOFEN classes as uppermost members of the archaic metamorphic schist series, though numerous insignificant traces of similar Iron oxides occur in the gneiss beds. The most characteristic occurrence is at a place called Chin-kuo-san, one of a low hill range along the coast between Chefoo and I-chow-fu (von Richthofen: Kin-sun-san), where the abundance of limestone fragments strewing the surface of the low hills, especially on the south-western slope, is remarkable. These can easily be traced to solid masses in the rock of more or less size and regularity, the largest being on the crest of the hill, where a temple is perched, marked as "Pagoda Hill" on the charts, and conformable to the strike of the limestone, its course can be followed east and west along the ridge and on neighbouring hills of the low range. The mineral, Limonite, is hydrous oxide of Iron, more or less mixed with carbonates of Iron and lime, oxide of maganese, and some quartz, and on closer examination parts of it are found to be of pseudomorphous crystalline structure, the shape of the crystals being modified cubes peculiar to pyrites. This peculiarity indicates the origin of these outcrops to be in the decomposition of bodies of sulphuret minerals, chiefly Iron pyrites, and gives a degree of probability to the supposition, based on native report, that Galena is to be found at Chin-kuo-san. These outcrops are therefore to be regarded as favourable sites on which to commence future explorations for mineral deposits which may be found in depth to carry Lead, Silver, or Copper ores. It is worthy of note that similar though much larger ferruginous outcrops, between limestone and quartzite, cap bodies of these sulphurets in the Chi-chow district, province of Anhwei, where limited prospecting operations have opened up quite a promising ore body.

A mineral product which really is mined and produced in considerable quantities, especially at Lai-chow-fu, is Steatite or Soapstone, found here in more or less purity and largely prepared for local use and exportation in the form of shih-fên-dse. This, a fine, white, non-plastic, pipeclay-like substance, is, I believe, mostly used for washing and bleaching purposes. Varieties of the Steatite rock are also mined as an ornamental product, the beautifully marked hwa-shih, some of which is cut into slabs and carved in various forms, which have procured for

the mineral the name of "Pagodite" in Europe. Similar minerals are also found in other parts of China and in Corea.

Quartz crystals form another source of desultory mining amongst the villagers in some of the higher ranges of granitic hills, particularly near Ping-tu and Chi-mi. The pure, unlissured mineral is used for the manufacture of spectacle lenses, which, when of a uniform, light, smoky-grey colour, are highly valued by the Chinese. Beautiful specimens of the black crystals are found and sold as ornaments, and Dr. Williamson mentions some of the peculiar violet hue, which constitutes the amethyst.

Asbestos occurs more or less frequently in the crystalline calcareous rocks, not, however, in sufficiently fibrous form to be of commercial value.

It is not at all improbable that when the days of geological surveys dawn on China, other valuable minerals will be discovered in Shantung, such as natural phosphatic fertilisers, or the ores of Sodium and Aluminium—that metal of the future. The necessary ingredients for glass are now found and utilised in its manufacture at Po-shan, and I have little doubt that some of the limestones would afford hydraulic cement. When, therefore, the Coalfields of the west are allowed to expand their resources, to supply the blessing of cheap fuel throughout the province, and the industries consuming the power to be generated by abundant Coal, come into life with the march of progressive culture, the true mineral resources of Shantung, other than those on which a partly fictitious reputation has depended, will be recognised and appreciated.

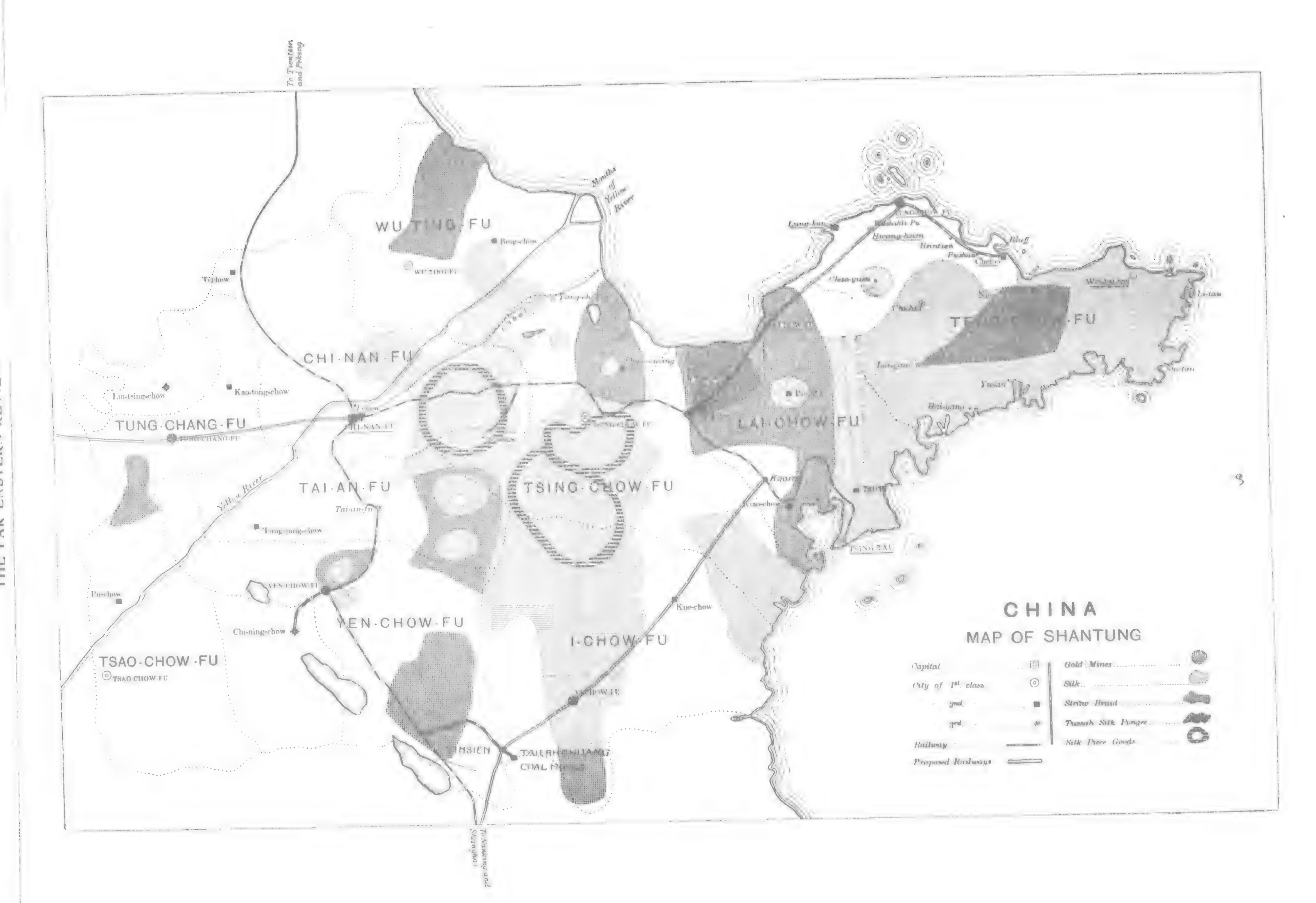
The Weihaiwei Gold Mines:—The presence of Gold in the Weihaiwei district led to the formation of a strong foreign company about ten years ago, to work the deposits. After the expenditure of large sums for plant and machinery, the workings were ultimately abandoned, and the affairs of the Company wound up in 1906.

Four years later other gold mines were discovered in Hu-Lang Shan and Hsien Shan within jurisdiction of the Chinese. It is alleged by the Chinese the British authorities in Wei-hai-wei demanded that these mountains should be included in the territory of Wei-hai-wei, as they wished to develop them with British capital. This demand was refused by the Chinese authorities, and many foreigners made overtures to obtain the concession for working these two gold mines. The Governor of Shantung persuaded the Peking Government to take steps to work these mines by the aid of Chinese capital, and the Board of Agriculture, Industry and Commerce sent a deputy to the mines to survey them with a view to raising the necessary funds to develop them.

Nothing, however, came of this reported activity, as the mines were never developed.

GOLD MINES IN SHANTUNG.

Chou-Yuen Mine:—The best-known mine in China is that of Chou-Yuen, about 40 miles SW. of Chefoo, where a quartz vein from 40 to 90 ft. wide has been uncovered for more than a mile in length. Curle reports that 200,000 tons of ore, worth \$10 per ton, has been developed. The ore is about 40 per cent. free milling, and many years ago a chlorination-plant was in operation upon the tailings from the stamps. The mine has been closed for many years by government order; but there has been constant effort on the part of foreign companies to secure the concession, and recently the Governor of Shantung petitioned the Peking government to allow the Chinese owners to operate the mine, fearing lest it might otherwise be lost. The near-by mines at Ping-tu are probably of considerable value. In spite of the government prohibition of mining a certain amount of work is carried on quietly, and Hoover estimated the gold production of Shantung at \$12,000 annually. With the few exceptions noted there seems little probability that deposits of sufficient size can be developed to justify the construction of modern milling-plants, the cost of labour being so low that primitive methods give cheaper working-costs. The tailings from the chlorination plant, mentioned above, were bought by



the neighbouring farmers, who carried the material home, and, in the dull agricultural season, ground it in native milis and panned it. The deposits near Wei-hai-wei have been described by Verschovle, but are of little importance.

The Pingtu Gold Mines:—The Pingtu gold mines in Shantung have long been known for the richness of the deposits and were some years ago worked by a Chinese Company with modern machinery and under modern methods.

The machinery imported for the working of these mines was on the principle of extraction through quicksilver, the gold being found in a pure state in the quartz. In course of t.mc, the quantity gained becoming less, the cost of extraction became proportionately heavier, eventually necessitating the suspension of work. Subsequently, gold was found in combination with sulphur, known as gold pyrites; but the Chinese, anding that the machinery they had was useless for gaining the gold whin found in this combination, were unwilling to go to the expense of buying new machinery, and the mines were closed after an unsuccessful attempt had been made to export the pyrites for treatment in Europe. It is, therefore, by no means proved that the Pingtu mines would not be prolitable if properly and honestly worked. As a matter of fact, some 3,000 ounces of gold sand reaches Wei-hsien annually from this quarter, is there melted down, and thence sent via Tsingtau to Shanghai for sale.

Br.t.sh and G.rman in ning experts have investigated the property and stand willing to develop the in nes with foreign capital, but true to tradition the Chinese refuse to entertain any

reasonable proposal.

Tengchou Gold Mines:—Three years ago Chinese papers reported the discovery b; natives of Tengchou prefecture, Shantung province, that the hill district of Wentenghsien, of which Langhushan is the highest point, is rich in gold quartz. A number of Shantung officials in Peking obtained the necessary permission from the Shangpu to develop the Langhushan, or Wolf and Tiger mountain gold deposits, the funds needed for the purchase of crushing and other machinery to be advanced by the Provincial Government of Shantung.

Apparently this tax on the Provincial revenues for the benefit of a few patriotic officials was never levied, as the deposits

are still awaiting the crushing and other machinery.

The T'ung-Tsing Go d Mine:—Reports are received from time to time of the gold mining at T'ung-tsing. The operations seem to be carried on in a more or less wasteful way, under the crude Chinese methods, a Wei-yuen being in charge who it is said claims a large percentage of all that is found. Chinese with a lust for gold come from near and far to share in the treasure, and some of them, fairly astute business men, have put in capital and lost heavily, the loss being partly due to failure to find treasure and partly due to fraud. Some fine refined gold specimens have been seen from this mine, in pieces of about one Chinese ounce in weight.

The Maoshan Gold Mines:—Among other concessions obtained by Germany from China was the right to work certain gold deposits in the province. There were five distinct rights conferred, and the Agreement st.pulated that the Germans should have the mines developed and in operation before August 29, 1909. One of the most promising of these mines was located in the Maoshan mountains in the district of Minghaichow about 30 miles to the northeast of Chefoo. A stamp mill and plant was duly erected, but the results were far from being profitable. The losses incurred induced the Germans to approach the Chinese authorities to redeem the mine at an adequate price, which was named at \$470,000 Gold. The negotiations led to considerable friction, but the mine was eventually taken over by the Chinese authorities. The Germans had failed to live up to the stipulations of the Agreements and the Concessions were cancelled.

Shao-an Shan Gold Mine:—During the last regime the gold mine of Shao-an Shan in the prefecture of Chihchow, Shantung, was operated exclusively under official control and as usual was a losing proposition. In December, 1912, Mr. Liu Sheu-chow, one of the gentry of Chihchow, petitioned the Government for permission to work the mine with his own resources.

The German Chinling Gold Mine:—According to Japanese reports a German carried out some prospecting during the last year at a place known as Chinling in Shantung. The result of his investigations indicated the presence of gold in paying quantities.

As he was unable to obtain a concession he endeavored to arrive at an understanding with the Chinese Government through the assistance of the German Minister in Peking who negotiated with the Chinese Minister for Foreign Affairs. It was then agreed that work under joint German-Chinese direction could be carried on.

The Chanese government is reported to have despatched Chang Chang-ru to Shantung to enter into arrangements with the German interested.

THE DIAMOND FIELD OF ICHOU

When the German experts were sent over the country to locate the must valuable fields, among the propositions taken up was a thorough prospecting, covering several years, of the diamond field near Ichoufu. It has been known for a long time that diamonds existed in southern Shantung, and a quantity of stones are continually being offered by natives in that locality. The Ichoufu diamond is, as a rule, not clear enough to be of much value for gems, but for all purposes where diamonds are used for industrial purposes, such as on marble saws and glass cutters, these stones answer very well. The district in which they are found evidently covers a large area, but in no case did the Germans manage to discover the stones in paying quantities. A good deal of surface work was carried on, but everything was finally abandoned. At that time the German foreman thought he had found the right place to work, but it was many miles north of the original diggings and seemingly not covered by the company's concession, and as no arrangements could be made with the native officials the matter was dropped.

At present the output of the district is regularly bought by Tsingtau dealers, but as the natives do not carry on regular mining operations, finding the stones they have apparently by chance on the surface, it seems doubtful if foreigners will again try to locate the field, as they have nothing to guide them in their efforts. The Chinese, on the other hand, will not tell where they receive their supply, always answering any inquiry by stating that the farmers wear straw shoes when plowing; these shoes they afterwards burn and occasionally find raw diamonds, which have stuck in the straw, in the ashes.

The diamond district lies fifty li southeast of Yichowfu, on the narrow strip of territory between the Yiho and Shai Rivers. It is the opinion of the German experts that the stones were deposited in their present position by the action of the water when there was a connection between the two rivers. It is supposed that the source of supply is somewhere in the Mengshan mountains, 50 miles to the northwest of Yichowfu. Diamonds, some of them of good quality, are being constantly picked up in the district referred to.

Mica Deposits:—Another mineral property which the Germans have looked into, but not attempted to work as yet, is a deposit of mica. This mica is reported to be rather cloudy, and not as clear as might be desired, but the flakes obtainable are of unusually large size and do very well for stove windows and similar uses. This mica supply is said to be very large, and would be a paying proposition if it were not so far removed from all means of transportation.

From Shanghai, which is the sole market for green teas in China, 33,828,550lb. of green tea were exported during the year 1913; 12.742,967lb. went to the United States and Canada, 523,320lb. to the United Kingdom, 9.316,014lb. to the Continent of Europe, 1,786,925lb. to Bombay, 7,994,c85lb to Batum, and 1,465,299lb. to the North African ports. All these figures, except those for Bombay, show marked decreases on the previous seasons.

THE CHUNG HSING COAL RAILWAY

Known as the Tai-tsao Railway, this line, something over 80 li in length, runs from the coal mines 20 li north of Yihsien down past that city to Taierchwang, the leading port of South Shantung on the Grand Canal.

Tsao-chwang.—Is an ordinary Chinese village of a couple of hundred families remarkable for nothing else than that it gives its name to the mines in the near vicinity. The town of note in the vicinity is Ch'i-tsun. This is a place of some 800 or 900 families, famous in all the region round about for its potteries. The great Kang water jars, used also for holding grain, some of them considerably larger than a flour barrel, are made here, while bowls and small jars are made by myriads. There are 13 kilns and each one of them can turn out between \$600 and \$700 Mex. worth of products per month. Nearly all, if indeed not all, the kilns are controlled by one very wealthy family of which one of the members is a Hanlin and a former Censor, Tsui by name. This town shares with Yen. Hsien, in Central Shantung, the pottery trade of this section.

YIHSIEN.—Is a trim little city attractively located at the opening of a valley. It was formerly spelled Ihsien and so appears in the Bond advertisement of the Tientsin-Pukow railway where it is mentioned as the point where the German section of the railway connects with the British section. The Post Office has changed the spelling to avoid confusing the place with an Ihsien in Anhwei. The city is prosperous but is not higher than a third rate district city as regards size and trade.

TAIERCHWANG.—This is a place of about 600 families. It has a brick wall surrounding it and one very fair business street. It almost supports a telegraph office and has also a Post Office with daily mail from the South. Here is an office for the collection of revenue from boats, and another office established by the Board of Commerce, Industry and Agriculture to see that the other office does not unduly oppress the boatmen and traders. The following are some of the principal distances from Taierchwang:

S.E.	via	Canal	to	Yaowan		• •	7 0	110 li
97	99	27		Hsu Chien	• •	• •	* •	
99	22	27		Tsingkiangpu		• •	4 9	360 "
22	22	22		Chinkiang	• •			720 ,,
1. 11.	22	22	"	Hawchwang			• •	83 "
9.9	27	27		Hsia Chen				140 ,,
		59	37	Tsiningchou				360 ,,
N.E.	22	land	23	Ichowfu		* *	• •	180 "
S. W.	77	land	22	Hsuchowfu	in 49		• •	110 ,,

THE MINES.—It is plain from the above table that the outlook for the mines is very favourable. Tsining is the second largest city of Shantung, somewhat decadent now owing to the diversion of the grain transit from the canal to the ocean but still a very large and by no means dead place. Ichowfu and Hsu Chowfu are flourishing cities of 60,000 or 80,000 population and centres of populous regions. Su Chien is a prosperous district city situated on the old bed of the Yellow River from which it draws sand for its glass-works. These are under the care of several Englishmen and use large quantities of coke. The road from the mines to Taierchwang is traversed by one continuous stream of barrows wheeling coke. I counted 50 in a couple of hours. Each barrow holds 600 catties and upward and the poor fellows receive about 500 small cash per day for their toil. Most of this coke, it is said, goes to the glass-works. Tsingkiangpu is one of the big towns of north Kiangsu.

THE OUTPUT.—At the mines is at present two thousand tons a day. The coal is only from two to three hundred feet deep and in places the seam is over 20 ft. thick. The coal is of excellent quality, bearing the reputation of being the most valuable deposit in the province.

The coal is quite soft and is remarkable because of its freedom from lumps. About a hundred coke ovens are in close

proximity to the mines.

The premises are quite extensive, probably three li long and two li wide. The concession granted by the Imperial Government to the company embraces a territory ten li square. The leading spirit of the company is Hon. Chang Lien-fen, formerly Salt head.

Commissioner of Shantung. So far as now known coal is found within a region 70 li long by 40 li wide. Another company headed by a rich Chinese of the vicinity, Mr. Liang, has another, but much less valuable, concession near by. There is a great future for the mines as the railway will make such large use of their coal, no other mines beinge so onveniently within reach of

It is almost a certainty that in the near future a railway will be built connecting the mines with the recently opened port of Haichow, in north-east Kiangsu. This will give the mines an outlet to the ocean. The real port is Ching Kou, not Haichow. The line will be easy of construction, running a hundred miles through the fertile and populous Ichow-fu plain and touching that city.

THE TAI-TSAO RAILWAY.—The 27 mile coal road is now in operation. There is one 60 metre bridge crossing a small river at Yihsien. There are only three other bridges and all together do not exceed 70 metres in length. The grade is extremely easy, there are only two cuts and these very light ones on the entire line. In addition to the two termini and Yihsien, there is but one other station, that at Ni-kou, a scattered village of some three hundred families half-way between Yihsien and Taierchwang. The materials, that is bridges, rolling stock, rails, etc., were supplied through the firms of Arnhold, Karberg and Co., and Carlowitz and Co. It is said that the Chinese concessionaire had to make a stiff fight at Peking to keep his prize from following the path of so much other mineral wealth of Shantung in passing under German control and the matter was compromised by the arrangement that in the development of the mines German machinery should be used. It is generally supposed that there is also some German capital invested therein.

The railway however is overwhelmingly capitalized by the Chinese, nearly all Shantung high officials being interested therein, Szechwan and Chekiang also being largely represented as well as capitalists in Shanghai and Tientsin.

The Railway is almost entirely a coal road. Eight cars and three locomotives were built for this traffic, machine shops were erected at Taierchwang. Limestone is abundant in the nearby hills.

The coal yard and wharf at Taierchwang is a large affair. About 45 English acres were purchased in a bend of the Grand Canal which bounds it thus on two sides. Along these two sides 700 ft. of wharfage stone masonry were constructed while on the two remaining sides a circumvallating moat was constructed which admits boats from the Canal. The whole plot has been elevated 5 ft. above the adjacent territory.

THE CANAL.—Is sadly in need of dredging. Only boats drawing half a foot can navigate certain sections of the upper part of the route from Chinkiang to Tsining.

SHANTUNG MULES

There are raised in the southern section of the Province of Shantung mules which compare favorably with those raised in the Western States of America. Splendid mules from Shensi Province also find their way into this Prowhere representatives of the British and German Armies, make considerable purchases for shipment through the port of Tsingtau and over the railroad to the port of Pukow on the Yangtze River. Mules standing 14 and 15 hands high, weighing 1,200 to 1,300 pounds, and from 8 to 10 years of age, can be bought at 160 to 200 taels (\$120 to \$150 U.S. currency). A man at Tsinanfu, Shantung, informs the American consulate at Chefoo that he can purchase 200 to 300 animals at these prices and arrange for shipping them to the port of Tsingtau, where they may be loaded aboard steamers for shipment abroad. Tsingtau is 250 miles distant by rail from Pukow.

Smaller mules adaptable for use in mountain work can be obtained at lower prices. Southern Shantung and northern Kiangsu are noted as good breeding places for donkeys, where they are sold in lots of 100 to 200 at about \$10 U.S. currency

ENGINEERING, FINANCIAL INDUSTRIAL NEWS

RAILWAYS

Tsingtao-Tsinan Railway.-From November 15th, on which date the Tsingtao-Tsinan Railway was thrown open to public traffic, till lanuary 22nd last, the earnings of the Line were: Passenger receipts, Silver Yen 119,8c8; Goods receipts, 177,343; Platform tickets, 116,70; Baggage charges, 1,259.70; Miscellaneous 2; a total of Silver Yen 298,529.40. The goods traffic was begun on December 15th, while platform tickets were made issuable on lanuary 2nd for any one wishing to enter the railway platforms as in vogue in Japan.

On February 11 the distance between Fangtzu and Changtien was made one section and fare was charged accordingly. The passenger rates are to be reorganized on the old German footing, and soon will replace the existing sectional system. Shippers report that the new railway freight tariff is even lower than the former German rates.

According to the inventory prepared by the Railway Regiment in February, the rolling stock now on the Line consists of about 1,000 goods and passenger cars and about 50 locomotives. None of the locomotives has yet undergone overhauling since coming into

lapanese possession.

The repairing of railway bridges, embankments, etc.. damaged by the Germans and hy the floods is awaiting plans and estimates to be drawn by Maj. Yamanouchi, of the Provisional Railway Regiment and Mr. K. Nakamura, the engineer lent by the S. M. R. Co., and effort to complete the repairs before the rainy season sets in will be made. The appropriation for the repairs has not yet been fixed definitely, but probably will be about Y600,000.

Kiukiang-Nanchang Railway.-The Nan Hsun Railway (Nanchang and Kiukiang) is now open from Tukiapu to within 3 or 4 li of Nanchang and is proving a great boon to Nanchang and Kinkiang replacing the steam launch System which was very uncertain. It takes about 8 hours to make the through journey by rail. A large bridge over the river at Tukiapu. in course of construction, will take a year or more to complete.

Kuangsi-Szechuan-Yunnan-Kueichow Railway. -- With reference to the construction of the Kuangsi-Szechuan-Yunnan-Kueichow Railway, new steps have been taken to raise funds for its construction. The Government found that the projected line was over 1,400 miles long and that it would hardly be possible for the Central Government to raise funds for its construction within ten years. With the war raging in Europe, foreign loans are impossible and the Ministries of Communications and Interior have decided to follow the precedent of the Canton-Hankow Railway. The Authorities of the provinces concerned will be requested to raise funds from private sources to start construction work on the proposed railway.

Sin-Chuen Railway. - A group of Canton merchants have organized with Mr. Chan Limun as President to build a railroad from Chun Shan to Sin Chuen. It is to be known as the Sin Chuen Railway and will connect with the Canton-Kowloon Railway at Chun Shan. Official recognition has already been secured and plans drawn up. Arrangements have been made to purchase the right of way.

Aigun=Tsitsihar Railway.—The projected railway from Aigun to Tsitsihar covers a distance of 1,100 Chinese li, and the cost of its construction has been estimated at \$20,000,000. At first, the Government intended to raise a foreign loan for its construction, but for some reason or other, the matter has been shelved. Recently, the Governor of Heilungkiang submitted a request to the Government to the effect that as the projected line between Aigun and Tsitsiliar would form an important factor in the development of that province, its construction admitted of no delay or hesitation, and that he can now raise \$9,000,000 from his province while Fengtien and Kirin will undertake to raise the balance of \$11,000,000. The Governor further requested the Government to permit him to issue bonds upon the proposed railway in order to raise funds to the prescribed amount, in case Fengtien and Kirin fail to contribute. The Government, in reply to the Governor's suggestion, permitted him to carry out his scheme.

The Pekin-Hankow Railway.—The Director of the Kin-Han Railway, with a view to extending the traffic of the line is about to raise a loan of one and half million dollars to double-track the line at certain points, the recent increase of traffic necessitating such a step. The loan has been sanctioned by the Ministry of Communications and will be called the "Kin-Han Traffic Development Loan," for which five classes of bonds varying from ten to ten thousand dollars will be issued. The loan will carry a monthly interest of 0.7 per cent. and will be redeemed within a period of two years. Instalments of funds will be drawn from the surplus funds of the Kin-Han Railway receipts and deposited in the Bank of Communications to repay the loan.

Chinchow-Taonanfu Railway.-Mr. Kuoshulin, a Chinese engineer, has completed the surveying of the proposed route for the Chinchow-Taonanfu line. He brought the map of the route prepared by him to Mukden recently. He is to go over the proposed route in company with Mr. Chang Yu-tien, president, and Mr. Yang Chan-hsin, vice-president, both of whom are at Mukden. Work will be begun in April. The Chinchow-Fuhsin section will be taken up first and the entire line is expected to be complete by late autumn.

Kirin-Changchun Railway. - The traffic returns of the Kirin-Changchun Railway for January were: - Passenger receipts, Silver Yen 42,807: Goods, 69,152: Miscellaneous 135 a total of Silver Yen, 112,007 which was a gain on the figures for the corresponding month of the previous year by S. Y3,479 chiefly due to livelier movements of produce.

Congestion at Vladivostok.—Upwards of So,000 tons of produce are awaiting shipment at Vladivostok. The Siberian and North Manchurian Railway have set apart a good portion of their carrying capacities for the transportation of military stores and it is feared that these two causes will seriously impede, if not absolutely block, traffic from North Manchuria to Vladivostok for the time being at least. The Russian Railway authorities have reserved the warehouses at Vladivostok for Siberian wheat for export to France. Beans are stored in the open. The brisk arrival of beans by railway already has taxed the capacity of the wharves, and the authorities may be obliged to decline further transportation of

heans to the Siberian port for the present. Several new wharves of a temporary character have been constructed hurriedly for the exclusive loading and discharging of military stores. A dozen American steamers were in port recently, and about fifteen more were expected. All were to ship Siberian wheat for i rance as return cargoes.

South Manchuria Railway. - Traffic returns of the South Manchuria Railway during the first half of the current fiscal year showed a falling off of Y2,130,000, and serious deficits were scared as the latter half of the preceding working year had brought record returns. A marked improvement set in early in December and continued throughout January. During that month traffic receipts reached Y2,136,092, an increase of Y1,045,988 over the corresponding month of the previous year. At the end of January the deficit in traffic receipts, was reduced to Y477,586. Returns for the last 8 days of February show a daily average of Y93,562, as against Y81,199 for the preceding decade, and an increase by Y12,196 over the figures for the corresponding period of last year. This makes the increase in the traffic receipts from December, 1914, to February, 1915 over the corresponding term of the previous season, Y 1,727,466.

Although nothing definite has been given out by officials regarding the amount of capital expenditures which the South Manchuria Railway Company proposes to invest during the next fiscal year, the total is estimated to be in the neighbourhood of Y6,000,000, as against

Y12,300,000 for current fiscal year.

The estimates for railway construction, improvements, etc., have been cut down to about Y900,000. The construction of a new engine-shed at Dairen, the double tracking of the Suchiatun-Mukden Section, and other projects have been shelved temporarily. The harbour improvements will be confined to the continuation of the works now in progress, such as the new third quay, the Northwest Breakwater, the shores at Jijiko, Hamacho, etc. These will cost about Yooo,ooo. The Land Department estimates have been reduced to a little over Y600,000 for prosecuting the incomplete work in the construction of waterworks, sewerage plant, roads, extensions of residential quarters for the Company's officials, etc. Further installations for the Agricultural Experimental Station, and all other new enterprises have been deferred. The Wharf Office estimates have been curtailed to about Yoon,000, and the construction of a steel-girdered warehouse on Main Quay, postponed after the foundation were laid appears to have been put further off.

Will Tax Passengers.—The President of the Japanese Railway Board has announced that a war tax of 25 per cent. of the fares will be levied on behalf of Russia at every station in Japan country on all passengers, luggages and cargo using the Russo-Japanese connection service.

Urga Kalgan Auto Service Starts-It is reported from Kalgan, that Mr. Prokin, a Russian, has started an automobile service between Urga and Kalgan and that the first car will run in February. The trip will be made in about four days.

To Bridge the Yangtse. - The China Times credits the Peking-Hankow Railway with contemplating the construction a railway bridge

at Hankow over the Yangtsze River. The site has been surveyed and the work and the cost have been estimated. It will be 3,750 feet long and 30 feet wide, and the largest span will be over 300 feet wide so that river craft will be able to pass. A double track railway will be laid.

Railwaymen to Meet .- The second Railway Union Convention between China and Japan will take place in Peking sometime in April. The Ministry of Communications has appointed 16 officials to make preparations for the coming Convention. The delegates in the coming Convention will consist of officials specially appointed by the Governments of both countries, the representatives of the various railways in both countries and the representatives of the leading steamship companies in Southern China.

Siamese Railway Receipts.—The Broad gauge or Northern line's receipts for January 1015 and January 1914 are as follows:-

Passengers Goods Others	Year 2457 258,500. 180,800. 6,300.	Year 2456 185,656. 156,691. 6,621.
Total The totals from April to	445,600. o January f	348,968. or last year

was Tes. 3,404,873 as against 3.100,332 in 1914.

China's Foreign Employes .- Many foreigners are employed by the Chinese Government in the Customs, railways, post-offices or other branches. According to the latest information the total is 3,948 persons, whose nationalities are: - British, 1,105; French, 1,003; German, 533; Russian, 463; American, 174; Japanese, 207; Italian 75; Austrian, 59; Belgian, 171: Others, 158, a total of 3,948.

New Shimbashi Station.—The Japanese railway authorities concerned have decided, it is reported, to rebuild the Shiotome Station or former Shimbashi Station at a cost of one million yen. According to Mr. Nishikawa, who is in charge of rebuilding, the present railway factories around the station are all to be removed to Oi-mura, and warehouses are to be built in place of the factories. The Shiotome bridge just behind the station is to be removed and a big wharf is to be built there so that about two hundred and fifty Sumida river boats can dock. The present station buildings will be replaced with a bigger new building. although some officials in the Railway Board desire to have a part of the present buildings retained as a souvenir of the famous old station. The construction work is expected to be begun after the next extraordinary session of the Imperial Diet. It is to be completed in one year and a half.

Siamese Bridge Tenders.—The Acting British Consul-General at Bangkok reports that tenders are invited by the Siamese Royal Railway Department, Broad Gauge for the supply of a steel bridge consisting of five 40-metre spans Sealed tenders, marked "Tenders for Steel Bridge," giving price per ton c.i.f. delivered on railway wharf at Bangkok, will be received, up to 10 a.m. on June 1, by the Director-General, Royal Railway Department (Broad Gauge), Bangkok, at which office copies of the specification and drawings may he obtained on paynent of 5 ticals (about 7s. 8d.) each.

New Ganges Bridge.-Despite the war, work on the second largest bridge ever constructed by British engineers, namely, that across the main Ganges at Sara, in Bengal, is up to time. A service of goods trains has been arranged for. The bridge is to be opened to passenger trains as soon as the metre gauge of the lines on the Northern side is converted to the 5 ft.

6 in. width of the Southern. Training works, 5,000 ft. long down both river banks, which cost three-quarters of a million sterling, keep the river to its course through the bridge. The bridge, which has a total river length of 5,900 ft., and, including land approaches. measures 15 miles, has cost roughly three and a quarter millions sterling. One of the principal advantages afforded will be a direct train connection between Calcutta and Darjeeling, the journey having hitherto been broken by steamer transit across the river. Apart from the convenience to the Government and the Himalaya tourist traffic, the real justification for the great undertaking will be the service rendered to the vast tea and jute growing tracts of Upper and Fastern Bengal, which will henceforward be enabled to convey their produce to the mills and docks of Calcutta with greater speed and economy.

Malay Peninsular Lines.—The Straits Echo learns from Singora correspondents that good progress is being made on the section of railway line between Uta-pao and the Perlis frontier. The distance is about 30 miles and on the first ten miles the earth work is already finished. The next ten miles is well in hand, and work soon will be in progress along the whole section. From the Perlis frontier to Alor Star is 12 miles. This is the backward section on the line. The line from Bukit Mertajam to Alor Star is rapidly approaching completion, whilst northwards of Uta-pao the railway is open for ordinary passenger traffic to Tung-Sawng (the junction with the Trang line) and is open for construction trains as far north as Bandon, some sixty miles beyond Tung-Sawng.

Tram Fares in Tokyo.—At the recent meeting of the Tokyo City Electric Enterprise Investigation Committee one of the municipal officials stated that the receipts from the enterprises were not sufficient to meet the repayment of the municipal loans of 90,000,000 yen to 1916 and those to the amount of 16.000-000 ven to fall due in the following year. The municipal authorties propossed raising of tram fares in the immediate future by at least I sen per ticket. Apparently this proposal has caused indignation among some sections of the citizens, who are backed up by prominent members of the City Assembly A certain member of the Assembly in criticising the measure is said to have suggested that it was desirable to abolish the transit tax and add the sum thus saved to the fares so that no increase in the citizens' burden would result from the attempt at appreciation of the municipal revenue.

Tram Plan. - Efforts to make the Hakone district a gigantic national park, are being furthered by the directors of the Odawara tramway company who have announced that they will extend their lines to Gora, about two miles and a half beyond the present terminus at Yumoto into the heart of the mountains, passing through Miyanoshita. At Gora, hundreds of villas will be built. The company has decided to issue a loan of ven 1,300,000, which will be raised by the Industrial Bank. The loan is to bear interest at 8 per cent, and be issued at Y97.

Manila Street Car Line: - For the first ten months of 1914 as compared with previous year, the street car company in Manila operated its cars at a decrease in net earnings of approximately 39 percent. The actual decrease in receipts from the railway department were \$48,882, or approximately 7 per cent; the increase in actual cash expenditures for operation amounted to \$60,473, or approximately 15 per cent; the outlay for track and roadway, overhead trolley system, etc., increased for the period \$28,866, or approximately 43 per cent; the maintenance of cars, shop machinery, and tools increased \$37,363, or approximately 82

decreased \$100,355, or approximately 30 per cent. During the period mentioned the company spent \$117,005 in improvements over and above those mentioned.

The following table gives the number of passengers carried during the first II months of IQI4:

7-1					
Pe	riod			1914	1914
January-June				10,441,713	10,217,000
July		• •		1,521,929	1,602,0.16
August				1,537,581	1,740,263
September	0 4	• •		1,214,588	1,685,204
October	4 4	• •	• •	1,510,593	1,790.381
November	• •	• •	4 6	1,450,775	1,770,212
Total	0 0	• •	6 6	17.677,179	18,914,006

The foregoing shows that the number of passengers carried during the first six months of the period under discussion exceeded the number for the corresponding period of the preceding year by 223,813, or about 2 per cent. but that the number carried for the last live months of the period shows a decrease of 1,460,730, or about 17 per cent. During 1914 the company erected 4 public waiting stations along its line costing about \$1,000, and added to its equipment 6 modern, center-entrance, steel cars of latest design and construction, costing \$33,000, and rebuilt 20 of its old cars at a cost of \$20,000.

Karachi Tram Extension .- The Karachi Tramway Co. has received a franchise to extend its tramway lines. The new line has been needed for some time and promises to be protitable. Actual construction probably will be delayed a short time, but owing to the war labor here is now cheap, and work probably will be undertaken at no distant date. The line is electric. Firms desiring to secure details of the new work should write to the manager Karachi Electric Tramway Co., Karachi, Sind, Northwest India.

Indian Railway Returns. - The recently issued Administration Report on Railways in India covers the financial year from April 1, 1913, to March 31, 1914. In that time the Indian state railways had better gross and net earnings than in the previous uscal year, but owing to increased interest charges the percent= age of net earnings to capital outlay fell from 6.48 to 6.19 per cent. Operation resulted in a surplus to the state of \$27,729,765 over and above interest charges and annuity payments connected with the purchase of railways by the state, whereas the surplus last year was \$27,-891,530. ()n March 31, 1914, the mileage of all the state and privately owned railways in India was 34,650 miles, 1,053 miles having been added during the year. The gross earnings of all the railways from April 1 to March 31 were \$206,01713.44, as compared with \$199,936,186, an increase of \$6,081,158, which was partly offset by increases in operating expenses of \$5.063. 518. The net earnings were thus \$99,322,848, as against \$98,905,269 in 1912-13. There was some increase in the passenger traffic, the number of passengers carried being 457,717,900. The passenger revenue was \$68,850,322, of which by far the larger proportion, \$59,510,374. was from third-class traffic. The average rate for all classes of passengers, slightly over a mills per mile, and the average distance traveled, 36.3 miles, have not materially changed since 1884.

Atami Line Next Year,—It is reported that the Japanese government has decided on the construction of the proposed Atami railway line commencing in the next fiscal year. According to the government's plan, as reported by the Japanese papers, the construction of the line is to be finished in eight year at a cost of Y.24,000,000. For the next fiscal year, the government will put aside about Y.600,000, with which the construction of a hig tunnel for the line is to be commenced. This line had been planned several years ago, and its construcper cent; the net earnings from operation tion was once commenced, but the work was

which was eager to curtail every possible appropriation for retrenchment. Other lines to be built in the next seven years are a line from Murakanu to Akita, one from Kawanoye to Saijo, that from Nayose to Simowakubetsu, and the Riumoye—Masike lines.

Szechuan-Hankow Line.—Road laying is now in rapid progress for the Szechuan-Hankow Railway up the Han river and unlike the former times all the people in the vicinity are pleased to see the work going on and expect better times after its completion. Many of the farmers have been enriched by the sale of land to the railway administration, and the prices of the low-lying farms have increased in view of the fact that by the construction of a road higher than their dykes no mundation need be feared in the future.

The Russo-Mongolian Railway. - According to a Japanese contemporary, the Russians are preparing to construct a double track railway from Kiachta to Urga. The right for building this railway is said to have been recently conceded to the Russians by the Urga Government. In taking this step, Russia, according to the newspaper report, aims at co-operating with Japan to occupy an important position in commercial dealings with the Chinese. A party of Russian engineers has been sent out to inspect the various places through which the projected line will pass. The work of building the railway will be started this Spring and the Russian Authorities expect to complete the work without undue delay.

BRIDGES

Manila, Pasig River Bridge.—Recommending the construction at a total cost of P1,280,000 of a three span reinforced concrete arch bridge across the Pasig River at the calle Rosario or plaza Moraga location, the bridge committee report (based on the recommendations of a sub-committee composed of W. L. Gorton of the bureau of public works as chairman, Jose P. Katigbak, acting city engineer, and L. F. Goodale, consulting engineer to the board of public utilities) states that four projects were considered in connection with the trans-Pasig traffic problem. These were:

(1) A tunnel under the Pasig from a point near the monument at the end of Malecon drive.

(2) A tunnel under the Pasig at the calle Rosario location.

(3) A bridge across the river near the Anda monument, and

(4) A bridge across the river at the best available point for the accommodation of traffic formerly passing over the bridge of Spain.

was found that the cost of a tunnel would approximate P5,000,000, which in the present state of the government finances, is a prohibitive figure.

The second project was adversely reported on by the committee for the same reason, and for the additional one that in that locality it would be practically impossible to secure land for the proper approaches.

The third project was considered desirable by the committee on account of the fact that a bridge so located would directly stimulate the development of the new port district. The estimated cost of such a structure was given at P1.500,000, only slightly in excess of that estimated for a bridge nearer the present bridge of Spain, but it was not considered that this matter was one of urgent necessity it being the sense of the committee that this project could will be deferred until a later date.

ommittee reported that the best available site

Appeared to be that at calle Rosario or plaza Moraga, where the committee recommended that P1,280,000 be spent in the construction of a three span reinforced concrete arch bridge. Of the amount so estimated as the total cost of the structure, actual construction is estimated as requiring an expenditure of P980,000, the remaining P300,000 being considered necessary for securing the right-of-way required for the approaches.

The various types of bridges proposed by the sub-committee and the estimated total cost of each is as follows:

Three span concrete arch bridge, P1,280,000. Three span steel arch bridge, P1,150,000. One span steel arch bridge, P1,413,000. One span suspension bridge, P1,290,000. Three span steel truss bridge, P855,000.

Bridge Contract for Siam.—In connection with the extension of the northern section of the Royal Siamese State Railways from Dene Chai to Chiengmai, a distance of 222 kilometres, a contract has recently been placed with the Cleveland Bridge and Engineering Company, Ltd.. of Darlington, for the manufacture and delivery at Bangkok and Chumphon of no fewer than 27 open lattice type girder-bridges of varying dimensions ranging up to 45 metres in length.

The northern section of the Royal Siamese State Railways, in which the present contract lies, has for some years past been under German direction, and a considerable portion of the steel-work and rolling-stock equipment has hitherto been obtained from Germany, but the contract in question was submitted to tender by the leading British and American bridge and structural engineering firms.

COMMERCE AND INDUSTRY

China's Foreign Trade.—Since the outbreak of the European war, China's exports to foreign countries, especially to the belligerent countries, have been greatly decreased. According to the return of the Chinese Maritime Customs, the following figures represent the value of native goods exported to the various belligerent countries during 1914:—

England ... Tls. 112,280,000
Germany ... , 6,110,000
Russia ... , 31,800,000
Japan ... , 138,310,000
France ... , 4,280,000
Austria ... , 3,410,000
Belgium ... , 13,130,000

Cultivated Land in China.—An approximate estimate of the number of mow (approximately one-sixth acre) of cultivated land in the various provinces gives the following particulars:

Provin	ce				mow
Chihli	* • •			• • •	135,800,000
Shantung	• • •	•••		***	75,970,000
Shansi	• • •	4 • •		• • •	101,830,000
Honan	• • •	• • •		• • •	87,940,000
Kiangsu			• • •	• • •	58,600,000
Anhui			• • •		74,810,000
Kiangsi		• • •		• • •	89,480,000
Chekiang	* * *		• • •		56,670,000
Fukien				•••	66,320,000
Hupeh	• • •				91,410,000
Hunan			• • •	• • •	103,380,000
Shensi	• • •				05,270,000
Kansu		• • •			96,966,000
Szechuan	• • •	• • •		• • •	165,653,000
Kuantung			• • •	• • •	1.29,970,000
Kuangsi		• • •			71,466,000
Yunnan	• • •	• • •	• • •		127,746,000
Kueichow	• • •	• • •			64,776,000
Sinkiang			• • •	• • •	81,120,000
Manchuria					241,805,000

Total.....2,146,962,000

Plan Silk-Weaving Company.-The Hangchow silk piecegoods merchants have sent Mr. King Yung-chung to Shanghai as representative to confer with silk merchants at this port as to the advisability of establishing a large silk-weaving factory to be worked with machinery on modern lines, as a checkmate to the rumoured intention of certain Japanese to form a joint concern with certain Chinese to do this kind of business. After several meetings, the silk piecegoods merchants of Hangchow, Soochow and Shanghai have decided jointly to float such a company. Their idea is reported to have the approval of the Chinese General Chamber of Commerce, the local authorities, the Native Products Protection Society and many prominent merchants of Shanghai. It is also understood that General Chu Jui of Chekiang will be asked to memorialize the President for protection and support. The capital of the proposed factory will be \$3,000,000 at least. Many proprietors of large piecegoods shops have gone to Japan to study the methods of machine silk-weaving there and it is said that most of the Japanese mills are working with machinery made in Germany. Mr. Sheng Ping-chang, a Chinese who has been successful as a silk-weaving factory preprietor at Osaka, has returned with his family to China with the intention of transferring his own establishment from Osaka to Chapei in the Shanghai district where he has secured a plot of land.

Tsinan Match Factory.—The match factory at Tsinanfu, called the Chen-Hua Match Co., Ltd., has a capital of \$200,000, of which one half is paid up. Fixed capital amounts to \$53,000. The company has an official monopoly, no tactory of a similar nature being permitted within the radius of 300 li. The superintendent, Tsung Liang-pi, has considerable experience in the business which he acquired during a 20 years' residence at Osaka. At present, 290 laborers are employed, of whom 200 are engaged in the manufacture of boxes. Their wages vary from \$6 to \$10 a month with board. The daily output is said to amount to 25 tons, one ton being made up of 6 cases, each of which contain 240 cartons of matches. Wholesale price is Tls. 23.50. For sometime, the factory was closed owing to the lack of material, but is now in full operation again.

Development of Yunnan.—With its fertile soil and mild climate, Yunnan has become a promising field for various industrial undertakings, promoted in recent years under the auspices of the local officials, with some success. Formerly, the breeding of silkworms was hardly known, but silk is now one of its staple products and the amount of its annual output steadily increases. The process employed by the natives in manufacturing the silk is primitive and imperfect and the silk often loses its lustre and colour so that it cannot meet the requirements of foreign markets. To remedy this evil, the Governor has ordered magistrates of the various districts to establish technical schools to teach the people the scientific method of rearing silkworms, manufacturing silk and cultivating the mulberry trees.

In order to improve agriculture, agricultural schools and seminaries have been established and, under their auspices, exhibitions of agricultural products have been opened. Teachers are employed to deliver lectures to farmers on scientific methods of tilling the soil. To improve irrigation systems of the province, a central Conservancy Bureau has been established in the capital with branch offices in the various districts.

Within recent years cotton plants have been introduced and two varieties now are generally cultivated. One is the Tungchow cotton plant and the other is an American variety. The weather and the soil of the province have proved favourable for the growth of the American plants, which yield fine crops. Yunnan is expected soon to rival the cotton-producing provinces in the Yangtze valley.

Shoe Factory Fails, - U.S. ConsulGeneral G. E. Anderson of Hongkong, reports: For the second time in the history of the business a shoe factory, equipped with modern shoemaking machinery and catering to both the foreign and the domestic trade in Hangkong and south China, has failed. The establishment has been operated for the past three years by Chinese capitalists, who have been connected with similar concerns on the Pacific coast of the United States and have had considerable experience in such lines. The factory seems to have failed simply for the reason that it was unable to compete with foreign shoes for the fine trade and with hand-made shoes for the Chinese and cheap trade. The manufacture of shoes on a modern basis and with modern factory equipment was commenced in Hongkong about 512 years ago with mixed foreign and Chinese backing. It has been described in previous reports. Factory equipment was obtained from the United States and an expert from the United States was put in charge of the operation of the establishment. The product turned out was quite satisfactory and in some lines was unique, for the concern not only produced shoes upon ordinary lasts, but also manufactured footwear for bound-feet women. After about two years of operation, however, it was found that the itinerant Chinese shoemaker and the small Chinese shops could copy foreign shoes by hand at prices which made it dissicult, if not impossible, to compete, and after further unsuccessful effort the factory was closed. Later on a new company was organized and the machinery was purchased, and with the revolution in some parts of Chinese dress following the political revolution in China there was a big demand for cheap shoes, and the factory did considerable business. About 1½ years ago it moved into larger quarters, and apparently it was becoming successful. Business in all lines has been bad in south China for the past 18 months, however, and of late months the factory lost money With the coming of the war in Europe there was an end to all hope of making it a success. The concern has a capacity of 500 pairs of shoes a day. The machines are those of the United Shoe Machinery Co.

paper Pulp for Hongkong.—The small paper mill in Hongkong which is manufacturing newsprint and other paper of a cheap grade for use of the Chinese newspapers consumes about 300 tons of imported pulp annually. The pulp is imported from Europe in canvas-covered bales, 8 bales to a 2,240-pound ton, and costs £9 (\$43.80) to £10 (\$48.66) c. i. f. Hongkong. The pulp used is first-quality, easy-bleaching, sulphide wood pulp. Considerable quantities of local pulp material are used in the factory, the use of American pulp in the establishment being only a question of price.

American Trade in Far East. - Vice Consul Crawford M. Bishop of Harbin, says in connection with the question of obtaining return cargoes for ships bringing American products to Manchuria and Vladivostok, inquiries have been received for soya beans, which form the principal export from this region, and as the European markets have been partially closed by reason of the war it is not unlikely that this may form an important item for export, The port of Vladivostok is now kept open throughout the winter by means of ice-breakers. Freight traffic on the Trans-Siberian Railway, which was much congested at the beginning of the war, has been resumed. Moreover, the doubletracking of the Trans-Siberian Railway has been completed as far as Irkutsk, and the railway is in a better position than ever before for handling freight. Since the Panama Canal has been opened to commerce it is possible for direct shipments to be made between the eastern coast of the United States and Vladivostok.

China Making Panama Hats.—The increasing use of foreign headgear in China has encouraged the Chinese to supply the local

demand. Hats and caps of Chinese make are often of excellent quality and can hold their own against foreign importations. Almost any style is now obtainable locally and Panama hats are among the most popular. A modern factory has been established at Chengtu, the capital of Szechuan Province, and its operation has been very successful. The hats are made from the leaf of a native palm that is abundant in this region. The leaves are cut into thin strips, bleached, and woven into hats that are scarcely distinguishable from the foreign product. About 200 workmen are employed, most of them apprentices, receiving per month the equivalent of approximately \$2 United States currency, one-fourth being paid in cash and the balance in food, clothing, and shelter. The factory is airy, clean, and well lighted; the employees contented, happy, and apparently satisfied with the treatment they receive. The manager of the hat factory is willing to sell a good quality of hats for men at \$20 United States currency per dozen, delivered at Chungking or Hankow; larger hats of the same grade for women's wear at \$30 per dozen. The shape and style can be made to order according to specifications.

Chefoo Foreign Chamber of Commerce.—The Chefoo Foreign Chamber of Commerce is much concerned over the marked falling-off of trade of that port last year, and has decided to petition the Peking Government conjointly with the Chinese residents there to defer the disbursement of Taels 750,000 for the opening of the port of Lungkou to international trade and to make an investment in the construction of the breakwater at that port and of the Chefoo-Weihsien Railway.

Teaby Post for Russia. - The transportation of black tea and lump tea, to Samarkand and Bokhara, has been contracted for by a British merchant at Shanghai. The consignments are put through the international postal service as parcel packages, reaching Dairen by steamer and are forwarded by rail. The annual amount of business put through in this particular line of trade is worth about Y5,000,000 per annum. Authorities expressed their wish to make preparations for handling the parcel packages. It was agreed with the Postal authorities that business should be commenced with five or six hundred packages per steamer, but this number has been increased to two thousand in a few weeks. Ordinarily the through railway freight on tea between Shanghai and Moscow is about Y6.50 per pud, whilst by putting the goods through the postal service, the charge is reduced to only Y3.23, viz., almost 55 per cent. cheaper. If imported via Odessa the steamer freight is Y3, and via Vladivostok Y5, in both cases exclusive of the Customs duty and other incidental charges. The Postal authorities will clear from this traffic something like Y100,000 per annum. The parcel post charge is 80 sen per package of 1 cubic foot.

Philippine Exports Gain.—The total trade of the Philippine Islands shows a loss of P.7,614,010 in the total trade for the calendar year of 1914 as compared with the returns for 1613. Total exports in 1914 showed a gain of P.1,833,356, but the imports showed a loss of P.9,448,266.

The total trade for 1914 amounted to (following figures all in gold) \$97,278,287. For the calendar year 1913 the total trade was \$101.085,752. Exports for 1914 amounted to \$48,689,634 and for the previous year \$47,772,956. Imports for 1914 totaled \$48,588,653 and for 1913 they were \$53,312,786.

Plans Hog Farm.—The Philippine Vegetable-Oil Company, manufacturing coconut oil, has announced that it will undertake the breeding and feeding of blooded hogs, using the byproducts of the oil factory. The company has acquired a ranch near Novaliches, Rizal, and shipments of Yorkshires, Berkshires, and Chester Whites have already come from Australia. It is expected that this experiment will result in a great improvement in the class of swine produced in the island, particularly in the vicinity of Manila. At present, despite the efforts of the Bureau of Agriculture to improve the breed, seconded by private importers, the grade of nog produced in the islands is low. Fresh pork is much sought after by the Filipinos in the markets, and the raising of even the mongrel native hog is found to be profitable.

Philippine Copra for Britain.—In the course of a recent report by American Consul Charles M. Hathaway of Hull, it is stated that the leading seed crushers and oil extractors of Hull—some of whom are also largely concerned in these industries in London and Liverpool—are apparently making preparations to embark in the extraction of palm-kernel and coconut oil, although palm kernels and copra have not heretofore been crushed in Hull in any quantity.

The extraction of palm-kernel oil seems to have progressed more rapidly than that of copra, and it is said that profitable results are in sight. However, there appears to be no doubt that coconut oil will be extensively produced in Hull in the near future. One firm is now crushing its first large batch of copra, this from Singapore. Others are making chemical analyses and working small parcels for practical tests, and machinery for the production of edible oil is, in several cases, known to be in process of installation. It is believed by this office that by January, 1915, Hull will be in position to take large quantities of copra.

The desirability of dealing with copra and palm kernels in Hull appears to have been brought to the attention of the local seed crushers' organisation by the British (Government) Board of Trade soon after the outbreak of the war, and the association has been as a body, investigating both lines since. As the extraction of copra oil on a large scale would require considerable extension of plant and the investment of considerable capital, the status of the newly established industry after the war is being carefully considered.

There seems to be no doubt of the profitableness of the undertaking so long as the war lasts and the trade of Hamburg is cut off; but some anxiety is expressed that, if conditions existing before the war should return, the German houses, supported by a ready market for copra cake in their own country, would have an advantage as against the British manufacturer, who must export most of his copra cake, as the British farmer has not learned its superior feed value.

Interviews had with various firms in Hull disclosed the fact that while they all had done some testing and analysing, none appeared to have examined any specimens of the Philippine product. A sample of ordinary fair merchantable Manila was obtained from London, and has been tested by two mills, and is now in process of testing by two others. The results so far are uncertain, and it is possible that the sample procured from London is not of sufficiently high grade to meet the local demand. However, this office is in direct communication with the Manila Merchants' Association, and it is hoped to procure exact information as to sun-dried Cebu, sun-dried and kiln-dried Manila, and other grades of Philippine copra, together with samples of each grade.

of Agriculture inspector who has recently returned from the Cagayan valley reports that the crop prospects for 1915, as far as tobacco is concerned, are very discouraging. The rainy season ended unusually early and since then very little rain has fallen. The anxiously expected winter rains have also failed. The first and early-sown seed beds were almost entirely destroyed by the drought and as many as three additional sowings have been made.

There are few if any of the planters who will succeed in setting out the usual area planted, and perhaps as an average not more than one half of the area planted in 1914 will be planted this year. The Cagayan valley usually produces about one-half the annual Philippine crop of tobacco. It is now so late that even with favourable weather conditions henceforth, the 1915 crop of tobacco will be very short.

Will Test Tax Law. - The energency internal revenue law passed by the last legislature, is to be tested in court as to its constitutionality, by the Standard Oil Company on the ground that it is unconstitutional as it provides for the collection of an import duty upon products imported from the United States. The collector of customs is charged with the collection of the internal revenue tax on such articles as petroleum, gasoline, naptha, and lubricating oils mentioned in the law but the Standard Oil Company wants the collections to be made by the collector of internal revenue because then collections are made on actual sales. The importations of these oils affected by the law last year in illuminating oil reached the total of 55,083,834 liters on which a duty of P.32,676 was collected on a value of P.2,140,346. Of this amount 48,251,738 liters. valued at P.2,202,352, was imported from the United States. Importations of naptha amountto 5.180,338 liters, valued at P.456,232, all of which came from the United Stated. Importations of lubricating oils amounted to 253,625 liters valued at P.286,448.

Camphor From Shrubs .- The Bureau of Science of the Philippine government is making a study of the plant known as Blumea balsamifera, known by the native in the Philippines as "sambon" or "gabuen," and which produces camphor. The shrub is one of the most common weeds in the Philippines. It grows from 5 to 8 feet high, with a stem almost woody in texture, and has long been used by the natives of the Philippines as well as by natives of China for medicinal purposes. The Chinese in parts of Kwangtung and Kwangsi Provinces already distill considerable camphor from the plant, the chief drawback to the more extensive use of it being the amount of labor required to secure the gum. It is well to note in this connection that the Bureau of Forestry at Manila is introducing the ordinary camphor tree of China and Japan into the mountain districts of Luzo to build up future camphor production in the islands.

Pearl Fishing Suspended.—The pearl-fishing industry of the Philippine Islands, which heretofore has yielded the government about \$25,000 annual revenue and furnished employment to about 1,000 men, is practically dead, as a result of the loss of the European market for shells, due to the war.

Those interested in the industry are now trying to get the legislature to modify the law which authorizes municipalities to fix the tax upon pearl fishing within their respective jurisdictions. At present the various municipalities exact a license tax on pearl fishing, varying from \$50 to \$500 per year, according to one authority. These rates are considered prohibitive, and as a result practically the whole pearl fleet of the islands is confined to the waters about Jolo.

Rice Crop Fails.—The prevailing drought throughout central Luzon has seriously affected the rice crop. Some observers estimate that the crop will be injured to the extent of 50 per cent in Rizal Province immediately surrounding Manila. Reports from Mariquina Valley, one of the most fertile regions in the Province, say that the rice plants there have dried up. In Nueva Ecija and Pangasinan Provinces, both large producers of rice, the latter the largest perhaps in the islands the drought has not yet seriously injured the growing rice. The Bicol Valley, in south central Luzon, is affected by the drought, and the rice crop there is already practically a failure.

Modern Sugar Mill Starts.—The new sugar mill at Calamba, on the Sugar Estates property, has begun operation. This is one of the most modern mills in the islands and is expected to do much to regenerate the sugar industry through that section of Luzon. Its full capacity is 1,200 tons of cane per day, and from the promising way in which the new machinery is starting off it is expected that the mill will soon be running at its maximum capacity.

Philippine Hemp-Grading.—New York importers of hemp (abaca) from the Philippines are offering the product for sale there by the new gradings; this fact, taken with the further fact that the producers and buyers are now showing less opposition to the new law than was manifested before the recent campaign of explanation and assistance conducted by the Bureau of Agriculture in the hemp Provinces, is likely to make a futher postponement of putting the law in operation seem unnecessary.

Japan's China Trade.—The falling-off in Japan's China trade, which set in in the early part of last year, has apparently reached a stage that may well cause apprehension among those interested.

In the Finance Department figures for the closing days of January, an alarming decrease is reported both in exports and imports. Exports are valued, according to the official report, at 2,947,386 yen against 5.852,729 yen of the corresponding period of last year, thus exhibiting a falling-off by 2,905,343 yen. The figures for the month put together, the falling-off comes to 3,512,533 yen, the whole figure being 8,698,164 yen against 12,210,697 yen of the corresponding term of last year.

In imports the figures for the thirty days are not so alarmingly lessened, reaching 3,112,428 yen against 3,473,365 yen for last year, a total decrease of 360,937 yen.

Yokohama Heavy Loser.—According to investigation of the Yokohama Chamber of Commerce, foreign trade in Yokohama during last year was greatly affected by the war, in all directions. Exports were 266,937,715 yen, a decrease of 49,883,673 compared with the preceding year, while imports were valued at 177,457,318, a decrease of 57,644,787 yen.

Relief of Silk Industry.—The Japanese Privy Council has rejected the Bill for relieving the existing depression in the sericultural and silk yarn industry. In consequence, the Government has decided to induce capitalists to organize a guild on a capital of Y2,000,000 and will grant a subsidy thereto for administering the intended relief.

According to investigations of the Department of Agriculture and Commerce, the total export of raw silk from Japan last year was 21,532,671 kin, (one kin equals one and one-third pounds) valued at yen 169,720,775. In comparison to the figures of the year before, in quantity there was a decrease of 7,729,690 kin, and in value yen 32,801,848. Altogether there was a remarkable decrease of 15 per cent from the year before.

Japan's Rice Yield—The actual yield of rice for 1914 is 57,007,054 koku which shows an increase of 260,505 koku as compared with the second estimates. The figures showed an increase of 6,751,787 koku and also 6,371,821 koku when compared with those of the preceding year and the average year respectively.

Yokohama Factory Zone.—A statistical report on Yokohama's factory system laid out by the city in 1912 for the wholesale removal of factories to half rural parts of the city, shows 353 factories in the city, of which 268 were outside the prescribed zone.

In the zone were, Dyeing and weaving plants, 17; Machine and tool making, 12; Chemical industries, 18; Comestibles, 6; Sundry, 39; a Total of 85.

In the city, Dyeing and weaving, 55; Machin and tool making, 42; Chemical industries, 17; Comestibles, 53; Sundry, 122; a Total of 268.

Trade of Chosen.—The trade of Chosen (Korean) ports was favourable during the past month, official figures showing exports at 3,900, 000 yen and imports at 2,970,000 yen. This means an increase of 370,000 yen in exports and a decrease of 930,000 yen in imports as compared with the corresponding month of the past year. The balance thus comes to 930, 000 yen, in favour of exports.

It is reported that the total amount of orders for war materials placed by the Russian Government to the Japanese manufacturers has reached to yen 60,000,000 since the opening of the war and Korea is to have a share, as an order for the supply of 1,000,000 pairs of boots is to be split, giving 200,000 pairs to the Chosen Leather Goods Company. The price agreed upon is said to be yen 7.50 per pair.

Bean Cake to Japan.—The export of Beans and Bean Cake to Japan for 1914 and 1913 were as follow:—

From Manchuria—Beans 1914, 2,516,076 piculs 1913, 1,778,516 piculs.

Bean Cake 1914, 10,460,606; 1913, 12,115,330. From Chosen—Beans, 1914, 1,147,085 piculs; 1913, 1,592,281 piculs.

The marked increase of the figures for Manchurian Beans in 1914 over 1913 is put down to the good crops throughout Manchuria and the utter stoppage of shipment to Europe on the outbreak of the European War. The reverse phenomenon in the case of Chosen Beans in 1914 is chiefly attributed to the failure of crops in the previous year.

The decrease in the export of Bean Cake is explained by the ebb of the purchasing power of the agricultural classes in Japan in consequence of the heavy depreciation in the rice market, the cake being a favorite paddy field fertilizer.

Japanese Paper Clothes .- "Kamiko," as paper clothing is called in Japan, is made of the real Japanese paper manufactured from mulberry bark. The paper has little "size" in it. and, though soft and warm, a thin layer of silk wadding is placed between two sheets of the paper and the whole is quilted. Velvet shirts and drawers made in this way are more comfortable than flannels. The Japanese soldiers realized the value of this kind of clothing when they had to weather a Siberian winter. This clothing is not washable, but a company in Yokohama is supplying large quantities of the paper shirts to the Russian Army. The garment is made of tough, soft fabric, strong enough to hold buttons sewn on in the ordinary way, and appears to be very serviceable.

The Russian government has placed with leading Japanese firms another big order, for 2,000,000 suits of summer clothes, 5,000 pieces of bread bags, 1,000 tons of copper and various other items.

Oil Export of Japan—The demand for various oils for export to Europe continues to be strong, and the dealers who had once been anxious to dispose of fish oil at yen 5.50 per 100 kin (\$2.75 per 133½ pounds,) are now quite reserved and the quotation is now yen 8.50 with stronger feeling. The quotations at present are: herring oil, yen 10 per 100 kin; whale oil, yen 11 per 100 kin; and shark oil, yen 10.50 per 100 kin; but it is said that the producers have practically no stock of whale oil to offer for sale.

As to vegetable oils, the demand is keen and price is souring up as in the case of fish oils. Bean oil is quoted at yen 13 per 100 kin, and tea seed oil at yen 14.50. The demand is also strong for linseed oil. But no transaction of any substantial amount is possible till the end of June, owing to lack of material.

Mukden's Fire Engine.—A new gasoline fire engine has been purchased by the Japanese Settlement at Mukden. The engine develops 12 horse-power at 700 revs. per minute with a capacity of 200 koku per hour.

Penchihu Furnace Starts.—The first charge of pig iron from the new furnace recently erected by the Penchihu Colliery & Mining Co. was drawn last month in the presence of leading officials of the company.

Pairen Soap Factory.—The Oriental Soap Factory, promoted by Japanese capitalists, has opened an office and has invited subscription to its shares to the amount of Y500,000. The Dairen Savings Bank has been arranged to receive the quarterly instalments. Negotiations to amalgamate the three local soap factories fell through but these factories are said to be ready to fuse into one concern to compete with the new company in project. In case the fusion goes through it is expected that the new company will abandon its plans.

Manchurian Wheat -The contracted export of 20,000,000 puds (333,333 tons) of Siberian wheat from Vladivostok to France in the course of four months has sent up the North Manchurian market from 85 kopeks on about February 10th to 2.02 kopeks at a recent date (or about \$1.75 per 1331/3 pounds.) Some foreign merchants are in North Manchuria buying up every grain of wheat they can contract for with the intention of exporting their purchases via the Amur as soon as the River reopens to navigation. A corresponding rise in the price of flour has followed. The total cereals for Europe now awaiting shipment by sea on Dairen Wharves are put at from 40,000 to 50,000 tons.

Tsuruga in January and February reached a total of ven 6,900,250. Last year the total foreign trade was yen 16,296,897, consequently, the business of two months in this year shows an increase of 603,353 yen than the total amount of the previous year. The enormous increase was due to the exports of woollen goods and military supplies to the Russian government.

Japan Needs Chemicals.—Chemicals of British and American manufacture have begun to be imported to fill the urgent need as warehoused stocks are exhausted. In the case of salycilic acid, none is obtainable. This substance is indispensable to Japanese sake as antiseptic. Attempts have been made to manufacture it from phenol (carbolic acid), but phenol itself has run short. As a last resort coal tar is being gathered from the gas works in order to use it as a material from which to manufacture chemicals.

Soap Industry in Japan.—According to a Yokohama newspaper the importation of soap is decreasing annually due to a gradual development of this particular line of domestic industry, although it has not yet attained the same level as in European countries. The imports of perfumed soap during 1913 amounted to \$02,308, while unperfumed soap imported during the same period amounted to \$78,567. Imports of unperfumed soap during the past five years have been as follows: 1909, \$233,803; 1910, \$261,204; 1911, \$276,051; 1912, \$117,774; 1913, \$78,567.

The share from the four leading countries in 1913 was as follows: France, \$60,808; England, \$6,610; Germany, \$6,346; United States, \$4,582.

The paper further states that the annual output by various soap factories in Japan amounts in value to \$3,084,000, 50 per cent being produced in Osaka, 40 per cent in Tokyo, and 10 per cent in other districts.

Japan Losing China Trade.—The fallingoff in Japan's China trade, which set in in the early part of last year, has apparently reached a stage that may well cause apprehension among those interested, says the Japan Financial and Economic Monthly. In the Finance Department's ligures for the closing days of January, an alarming decrease is reported both in exports and imports. Exports were 2,947,386 yen against 5,852,729 yen in the corresponding period of last year, thus exhibiting a falling off by 2,005,343 yen. The figures for the full month show a decrease of 3,512,533 yen from 12,210,607 yen in 1914.

Imports are not so alarmingly lessened, for the month's total reaches 3,112,428 yen against 3,473,365 yen for last year, the decrease

being 360,937 yen.

Detailed figures with 1,000 omitted are as

follows:						
		EXP	DRTS			
				Jan	nuary,	lanuary,
					1915	1914
Manchuria			***	***	692	530
North China .			***		2,449	2,276
Central China.		***	***		5,432	9,277
South China			***		125	128
Total	***	***		***	8,698	12,211
		IMPO	RTS		*	
				Jai	nuary,	January,
					1915	1914
Manchuria		900			215	142
North China	***			***	1,223	538
Central China.			***	***	1.548	2,639
South China			***		125	128
Total	***	* * *	***	***	3,112	3,173
The falling-c						
extent in expo						and the second second
dwindling of tra	ade	with	the	cen	tral di	stricts of
China. Refined						
China. Mennet	1 5	ngai,	10	1101	Y CA E 3	, cotton

Japan's Trade with Britain.—According to the Yorodzu, Japan's trade with Great Britain for the past three years is as follows:—

items in the general decrease.

textile fabrics and coal, are the most important

	Exports. Yen.	Imports. Yen.
1912	29,790,000	116,000,000
3013	32,860,000	122,000,000
1014	33,080,000	02,000,000

Japan's Raw Silk Exports.—According to the latest official investigations the export of raw silk for the past season comes to 21,532,671 kin, valued at 168,808,762 yen. In comparison with the preceding season this figure is a decrease by 7,729,600 kin in the volume and 32,801,848 yen in the value, fully 15 per cent.

World's Rubber Harvest.—Pending receipt of further official figures, "The World's Rubber Position" (London: Rickinson and Son) gives the rubber output for 1914 at 70,770 tons for Plantation, 37,000 tons for Brazilian, and 12,000 tons for the rest, a total of 119,770 tons. This compares with an output of 108,440 tons in 1913, being an increase of 10.4 per cent. As to the distribution in 1914 the following figures (in tons) are given, the figures for 1913 being set out for comparison in brackets:—

America, 55,000; Canada, 1,770 (United States and Canada, 48,000); Great Britain, 18,000 (18,640); Germany, 13,000 (15,500); France, 7,000 (6,500); Belgium, 1,000 (3,000); Russia, 14,000 (9,000); Austria-Hungary, &c., 2,000 (3,000); Italy, &c., 4,000 (2,000); Scandinavia. 2,000 (1,500); Japan and Australia. 2,000 (1,300); total, 1914, 119,770 tons, against 108,440 tons in 1913.

The total estimated output for 1915 of all sorts is 120,000 tons, which is only of per cent. of increase over 1914, though Plantation goes up to 85,000 tons. Brazil is, however, only credited with 30,000 tons, and the rest of the world with 5,000 tons.

F. M. S. Rubber Exports.—According to telegraphic information received by the Malay States Information Agency in London, the exports of cultivated rubber from the Straits Settlements in 1914 amounted to 19,727 tons, as compared with 11,889 tons in 1913. These figures include transhipments of rubber from

various places in the neighborhood of the Straits Settlements, such as Borneo, Java, Sumatra, and the non-Federated Malay States.

Indo-China Prosperous .- According to a recent statement by the Governor, Indo-China's wonderful natural resources had enabled the despatch since the beginning of the war of no less than 300,000 tons of rice to France and the allies, and 200,000 tons of coal for military purposes. During 1915 the colony could supply a million tons of rice, 200,000 tons of maize, a similar quantity of salt and 700,000 tons of coal. Thanks to the financial situation the colony had been able to place Piastres 20 millions at the disposal of the home government. One million had already been devoted to the purchase of provisions required by the Minister of War. In spite of the crisis, the economic position of the colony was thoroughly sound. The total value of exports and imports during the first four menths of the war amounted to 130 millions. This figure, though less than the total for the corresponding months of 1913, was higher than the corresponding totals of 1911 and 1912. The failures and liquidations during the year 1914 to date were one third less than in the preceding years. Since the beginning of the war the budget surpluses amounted to six million piastres. This figure had only once been exceeded, in 1913. It was three times as great as the biggest surpluses that had been realised before that date.

Java Tea Crop.—The London firm of Messrs. Brooke, Bodd and Co., Ltd., in their review of the tea trade for the year, write:-A large increase in the Java crop was expected, but anticipations were not fulfilled. The increase in exports was only 3,000,000 lbs., whereas 10,000,000 or 11,000,000 had been foretold. Weather was unfavourable, and there were labour difficulties. The quality of this year's Java crop was above the average. The Inited Kingdom took about 500,000 lbs. more than last year, America and Canada a little more, Australia a million less, and Russia over 3,000,000 lbs. more. The greater part of the 1,800,000 lbs. sent to Singapore also probably went eventually to Russia. Sumatra has now taken her place as one of the tea-producing countries of the world, and must be considered as having passed the experimental stage. The tea compares favourably with the hest turned out by the planters in India, Ceylon, and Java.

Indian Cotton Crop Forecast.—The director of statistics of the Indian Government in a memorandum on the cotton-crop season of 1914-15 states that the total area in cotton amounts to 24,000,000 acres. The total yield is estimated at 4,900,000 bales of 400 pounds each. The outturn is 5 per cent less than last year. The season has been favorable, except that heavy rains adversely affected the crop in certain districts. The final report soon will be published.

Rice Crop in Japan.—The Government has published a statement on the actual result of the rice harvest for the season just closed, which is estimated at 57,007,054 koku. It is 6,751,787 koku above the previous record and 6,371,821 koku above the normal. This gain of between 13 and 12½ per cent. over previous records is unprecedented.

Burma's Rice Crop.—The summary of the fourthforecast of the rice crop in Burma for the year 1914-15 states: The fourth forecast of the Burma rice crop shows a cropped area of 9,926,000 acres, a decrease of 130,000 acres on last year's actuals. The gross outturn will amount to about 5,900,000 tons of unhusked rice or an exportable surplus of some 3,400,000 tons of unhusked rice, equivalent to 2,600,000 tons of cargo rice.

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Steam Turbines

Dick, Kerr & Co. Ltd. General Electric Co. Westinghouse E. & M. Co.

Steel Manufacturers

United States Steel Products Export Co.

Steel Works

Bohler Bros. & Co., Ltd. U. S. Steel Products Co.

Stokers

Babcock & Wilcox Ltd.

Stretchers

Simmons Mfg. Co.

Structural Steel

Bohler Bros. & Co. Shanghai Dock & Engineering Co., Ltd. U. S. Steel Products Co.

Sugar Machinery

A. F. Craig & Co.

Superheaters Babcock & Wilcox Ltd.

Schmidt Superheating Co.

Tanks

Pacific Tank and Pipe Co. Shanghai Dock & Engineering Co., Ltd. U. S. Steel Products Co. A. F. Craig & Co.

Telephones

The Western Electric Co. Kellegg Switchboard & Supply Co. Anderson, Meyer & Co.

Textile Machinery

A. F. Craig & Co.

Tiles and Bricks

Green Island Cement Co., Ltd. Kailan Mining Administration.

Tobacco Dealers

British-American Tobacco Co., Ltd. Cia. General de Tabacos Olsen & Co., Walter E.

Tools

American Tool Works Co. Shanghai Machine Co. Shanghai Dock & Engineering Co., Ltd.

Tool Steel

Bohler Bros. & Co. Ltd. U. S. Steel Products Co.

Tramcars

Huist, Nelson & Co. Ltd.

Tramway Equipment

Dick Kerr & Co. Ltd. Westinghouse E. & M. Co.

Tramway Supplies and Specialties Anger Mfg. & Supply Co.

Trucks

Commercial Car Co.

Valves

Shewan, Tomes & Co.

Vegetable Oil Plants.

A. F. Craig & Co. Ventilating Apparatus

Water Softeners

Shewan, Tomes & Co.

Babcock & Wilcox Ltd.

Waterworks Equipment Edgar Allen & Co. Ltd.

Worthington Pump Co.

Weaving Machinery

Shewan, Tomes & Co.

Weighing Machines

W. & T. Avery, Ltd. Windmill

Fairbanks, Morse & Co.

Wood Working Machinery American Tool Works Co.

Deflance Machine Works Shanghai Dock & Engineering Co., Ltd.

Wrenches

Trimont Mfg. Co.

The Far Eastern Review

Engineering :-: Mining :-: Commerce

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